

**TOWN OF DAVIE  
TOWN COUNCIL AGENDA REPORT**

**TO:** Mayor and Councilmembers

**FROM/PHONE:** Will Allen, Redevelopment Administrator / 954-797-2093

**PREPARED BY:** Will Allen

**SUBJECT:** Ratifying The Approval Of A Contract And Awarding The Bid For Site Remediation-CRA Property, Northeast Corner Of Davie Road And Orange Drive

**AFFECTED DISTRICT:** District 2

**ITEM REQUEST:** Schedule for Council Meeting

**TITLE OF AGENDA ITEM:** A Resolution Ratifying The Approval Of A Contract Between The Town Of Davie Community Redevelopment Agency And GeoTech Environmental, Inc. For Site Remediation -CRA Property At The Northwest Corner Of Davie Road And Orange Drive, Authorizing The Mayor To Execute The Resolution, And Providing For An Effective Date.

**REPORT IN BRIEF:** Bids for the site remediation at the northwest corner of Davie Road and Orange Drive were opened on July 24, 2007. This bid is to remove the traces of oil and oil residue which were left from when the tanks from this former gas station were removed. A small plume of oil particulates remains. The contamination was not graded high enough to qualify for state funding to remove the contaminants. Six bids were received including one no bid. The prices ranged from the low bid of GeoTech, Environmental, Inc. of \$94,016.50 to a bid of \$453,191.36. The recommendation is to award a contract to the low bidder, GeoTech.

**CONCURRENCES:** The CRA Board approved the contract at their meeting of September 24, 2007. CRA Attorney, Sue Delegal prepared the contract.

**FISCAL IMPACT:** Yes

Has request been budgeted? Yes

If yes, expected cost: \$94,016.50

Account Name: Special Projects 010-0405-515.05-02

**RECOMMENDATION(S):** Motion To Approve The Resolution

**Attachment(s):** Resolution  
Contract Between CRA And GeoTech, Environmental, Inc.  
Bid Tabulation  
August 3, 2007 From Lisa Maack of Calvin, Giordano &  
Associates, Inc.

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION RATIFYING THE APPROVAL OF A CONTRACT BETWEEN THE TOWN OF DAVIE COMMUNITY REDEVELOPMENT AGENCY AND GEOTECH ENVIRONMENTAL, INC. FOR SITE REMEDIATION -CRA PROPERTY AT THE NORTHWEST CORNER OF DAVIE ROAD AND ORANGE DRIVE, AUTHORIZING THE MAYOR TO EXECUTE THE RESOLUTION, AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Davie Community Redevelopment Agency purchased property at the northwest corner of Davie Road and Orange Drive which was formerly a gas station; and

WHEREAS, the site must receive remediation to remove the remnants of oil contamination from the soil within an area of a plume from which the contamination must be removed and the soil replaced; and

WHEREAS, the Davie Community Redevelopment Agency has solicited bids from contracting firms for the purpose of providing a site remediation plan; and

WHEREAS, the firm of GeoTech Environmental, Inc. provided the lowest responsible bid for providing the site remediation.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF DAVIE, FLORIDA;

SECTION 1. The Town of Davie does hereby ratify the Agreement or Contract between the Town of Davie Community Redevelopment Agency and GeoTech Environmental, Inc. in the amount of \$94,016.50 for providing site remediation for the property at the northwest corner of Davie Road and Orange Drive.

SECTION 2. The Mayor is authorized to acknowledge such approval by affixing his signature to said Resolution.

SECTION 3. This Resolution shall take effect immediately upon its passage and adoption.

PASSED AND ADOPTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2007.

\_\_\_\_\_  
MAYOR/COUNCILMEMBER

ATTEST:

\_\_\_\_\_  
TOWN CLERK

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2007

Date : \_\_\_\_\_, 2007

## AGREEMENT

BY THIS CONTRACT (herein called this "Agreement") THE TOWN OF DAVIE COMMUNITY REDEVELOPMENT AGENCY, a public body corporate and politic created pursuant to Chapter 163, Part III, Florida Statutes, whose address is 3921 S.W. 47<sup>th</sup> Avenue, Suite 1008, Davie, Florida (the "OWNER") and GEOTECH ENVIRONMENTAL, INC, whose address is 7737 N. University Drive, Suite 206, Tamarac, Florida 33321 (the "Contractor") agree as follows:

ARTICLE I. General: Owner and Contractor wish to establish a general Contract of terms and conditions under which Contractor's work will be conducted for site remediation, CGA Project No. 06-5789 (the "Project").

(a) Contractor shall furnish all supervision, labor, tools, equipment, and licenses necessary to perform the work described in this Contract (hereinafter called the "Work"). Contractor shall perform the Work in strict accordance with this Contract and the general and special conditions, specifications, schedules, drawings, and other items forming a part of the Contract.

(b) The scope of the Work herein above described is intended solely as a general outline for convenience in specifying the Scope of the Work and does not eliminate any requirements in this Contract or any items required for completion of the Project intended by this Contract. The intent of the Technical Specifications (hereinafter defined) is to provide the Owner with a complete, fully functional Project in full compliance with all applicable local, city, county, state and national codes and regulations and the highest standards and practices of the industry. All labor and equipment required to fully comply with the requirements and intent of the Technical Specifications are included under the scope of this Contract. Any request for extras which appears to be based either on the lack of specific details in the plans or specific reference in the specifications, will not be approved as an extra if in the sole opinion of the Owner the work in question is a required item under the Technical Specifications (which opinion shall be conclusive and binding on Contractor).

(c) The attachment to this Contract of General Conditions and Technical Specifications, or enumeration of parts thereof, listed in **Exhibit "A"** attached hereto (hereinafter "Technical Specifications" including Florida Administrative Code Chapter 62-770), is for emphasis or to comply with applicable laws or regulation, at the direction of the Town of Davie and the Broward County Environmental Protection Department, and is not an exclusion of any other parts.

(d) The Contractor shall be bound by all representations contained in its bid, a copy of which is on file with the Town of Davie.

(c) Compensation for the services to be performed by the Contractor shall be paid upon the completion of each Task as shown on **Exhibit "B"** attached hereto, not to exceed ninety four thousand sixteen dollars and sixty cents (\$94,016.60). The estimated work hours and unit price breakdown for each task in connection with the services to be performed hereunder is shown on **Exhibit "B"**.

ARTICLE 2. **Contractor's Duties:** Contractor agrees to fully cooperate with Owner to perform the Work in the most expeditious and economical manner consistent with the interests of Owner. Contractor further agrees to (i) utilize the Contractor's best skill, efforts and judgment in furthering the interests of Owner, (ii) furnish efficient administration and supervision of the Work, and (iii) furnish at all times an adequate supply of labor and equipment in order to complete the Work within the time required by this Contract. Contractor agrees to furnish and pay for all labor, equipment, tools, machinery, transportation, general field requirements, and other costs and expenses whatsoever, both direct and indirect, necessary to complete the Work in strict accordance with the Contract and Technical Specifications, as the same may reasonably be amended, modified or interpreted from time to time by Owner. Contractor shall pay any and all costs and expenses incurred in completing the Work, whether or not such items are actually incorporated or consumed in the construction of the Project and regardless of whether such items are temporary or permanent in nature.

ARTICLE 3. **Compliance With Laws, Codes and Restrictions:** Before commencing any Work Contractor shall deliver a copy of its contractor's license and an appropriate occupational license to Owner (which licenses must be kept active and in good standing at all times). Contractor agrees that all Work shall strictly comply with (i) all development, building, zoning, fire and safety codes, and (ii) all other ordinances, statutes, rules, regulations and laws affecting the Project, as the same may reasonably be amended, interpreted or enforced from time to time, all with no additional compensation payable to Contractor and as if originally specified in the Contract. Contractor represents and warrants to Owner that Contractor and all of its subcontractors, subcontractors, material men, suppliers, laborers and others performing all or a portion of the Work (each, a "Lienor") are bound by the Technical Specifications and the Contract as they relate to any portion of the Work performed by said parties.

Any changes, additions or amendments to governing laws, ordinances, statutes, rules, regulations and covenants and declarations which become effective after the date of this Contract is signed by the Contractor, to the extent the Contractor incurs extra costs due to the changes, additions and amendments, shall be grounds for the Contractor to receive additional compensation from the Owner.

ARTICLE 4. **Construction Means and Testing:** Contractor shall be solely responsible for all means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract. If the inspection is by an authority other than Owner, Contractor will arrange for such inspection and promptly advise Owner of the date fixed for such inspection and any required certificates of inspection being secured. Any special or other (e.g. threshold) inspector engaged for the Project pursuant to any law, code, ordinance, rule or regulation shall be deemed an agent or representative of the governmental agency to which the

inspector renders reports or certifications. All required certificates of inspection, testing or approval shall be secured by Contractor, at Contractor's sole expense, and promptly delivered to Owner.

ARTICLE 5. **Scope of the Work:** It is the intent of Owner and Contractor that the Technical Specifications provides for the performance of completed and tested work by the Contractor, including all devices, materials or other work not shown in the Technical Specifications but which are reasonably inferable therefrom and any and all incidental accessories necessary to make the Work complete and operable in all respects (even if not specified in the description of the work, but necessary for proper installation and operation of the Work under the Technical Specifications), all of which shall be provided by the Contractor as part of the stated Contract Price. Any request for extras which appear to be based on either the lack of specific details or specified reference in the Technical Specifications will be not approved as an extra if, in the sole opinion of the work in question is a required item under the Contract (which opinion shall be conclusive and binding on Contractor). Owner shall have the right, at any time, to supplement the Technical Specifications for the Work with consistent drawings and schedules and upon doing so such drawings and schedules shall immediately become part of the Contract. Contractor shall do the several parts of the Work at such times and in such order as Owner may direct and in the event the work is divided into sections, Contractor shall prosecute all sections simultaneously if requested by Owner.

ARTICLE 6. **Title to Materials:** All Work furnished, fabricated or delivered to the Project and all materials, fixtures or equipment installed in the Project shall be free and clear of any claims, liens or encumbrances. Immediately upon performance of any part of the Work by Contractor under this Contract, title to all such Work shall vest in the Owner, and Contractor warrants such title shall be free of any claims, liens or encumbrances, except to the extent that payment for such Work is due under this Contract.

ARTICLE 7. **Construction Liens:** Contractor shall ensure that no construction liens, or other encumbrances whatsoever (including equitable lien claims), shall be filed or maintained by the Contractor or by any subcontractors, sub-subcontractors, material men, laborers or other lienors (each, a "Lienor") in connection with any Work for which Owner has made payment or for which payment is not yet due under the Contract. Contractor agrees to indemnify, defend and hold Owner harmless from and against all liens or other claims whatsoever filed by or against the Owner or the Project by any Lienor for work performed or materials or services furnished in connection with the Work for which Contractor has been paid or for which payment is not due at the time the lien is filed. In the event a claim of lien is filed against Owner's property, Contractor shall cause the same to be satisfied within five (5) days following the date of filing, or in the alternative, shall cause the claim of lien to be transferred to bond.

ARTICLE 8. **Commencement and Completion of Work:** Contractor agrees to commence the Work immediately upon notification by Owner of the desired commencement date. Contractor agrees to coordinate the progress of the Work in accordance with the schedule developed by Owner, as may be reasonably adjusted by Owner from time to time as shown on **Exhibit "C"**. The time frames established in **Exhibit "C"** shall prevail to the extent of any conflict with the time frames set forth in **Exhibit "A"**. Contractor shall complete the Work for

amendment thereto) and such completion date ("**Completion Date**") shall be as shown on **Exhibit "C"**.

The Work shall be deemed completed when all of the following have occurred to Owner's reasonable satisfaction:

(a) All necessary governmental approvals, licenses, operating permits or other applicable approvals for the Work, including certificates of occupancy (if applicable) or final approvals, have been obtained and any final, unconditional inspections of the Work have been conducted by all applicable agencies;

(b) Contractor must have furnished to Owner a Final Contractor's Affidavit verifying that the Work has been completed in accordance with this Contract and the Technical Specifications and that all Lienors have been paid in full, accompanied by a Final Lien Waiver and Release of Lien duly executed by Contractor and each Lienor, all in a form prescribed by Owner in its sole discretion, to ensure lien-free completion of the Work;

(c) Owner has accepted the Work in writing; and

(d) Contractor, at its sole cost and expense, must have furnished to Owner accurate and complete information which Owner deems necessary or desirable to document completion of the Work (including any and all Change Orders, extras and any changes made in the field).

**ARTICLE 9. Progress Payments:** Owner agrees to pay Contractor for the performance of the Work, the Contract Price specified herein, subject to adjustments and offsets provided herein, in monthly payments ("Progress Payments") during the progress of the Work. Contractor may apply for Progress Payments by submitting an executed request for payment ("Payment Request") in the form now or hereafter required by Owner, based upon the stage of the Work completed and installed through the date of the Payment Request. If any stage of the Work requires testing or special approvals, Contractor may only make application for payment after that portion of the Work has been tested and approved. Payment Requests shall show (i) the value of all labor and materials incorporated into the Work through the end of the preceding billing period, (ii) the **ten percent (10%)** retainage to be withheld by Owner from that Progress Payment, (iii) the cumulative retainage withheld by the Owner through the date of the preceding billing period, (iv) all prior Progress Payments made, and (v) the net amounts for each item of the Work requested by the Contractor for that Payment Request. Contractor may only request payment for installed and fully completed work and no partially completed Work or portions thereof shall be payable even if such Work is expected to be completed prior to the time payment for that application is due. Payment Requests shall not include the cost of stored materials or materials delivered to the site which have not yet been installed. Owner is only responsible for installed materials that have been Certified and approved by all required agencies; Contractor shall be solely liable for any loss or damage to all materials (whether installed or stored on-site or off-site), unless otherwise specifically agreed by Owner in writing.



Contractor shall not submit Payment Requests more frequently than once per month. Owner shall have a period of **30** days after receipt of a proper Payment Request in which to pay Contractor for any sums then due. **Owner will retain ten percent (10%)** of each Progress Payment. No Progress Payment (including the Final Payment) made under a Contract shall be construed as Owner's acceptance of defective or improper Work nor construed as a waiver of Contractor's obligation to perform the Work in strict compliance with the Contract. Contractor shall deliver the proof of insurance required pursuant to the Contract upon execution hereof.

All Payment Requests shall be accompanied by a list of Lienors who have furnished labor, materials or equipment through the date of that Payment Request and such invoices, purchase orders, receipts, vouchers and other back-up as the Owner may require to verify the amounts actually expended in the prosecution of the Work. Contractor shall also deliver to Owner, together with each Payment Request, an appropriate affidavit, lien waiver and/or satisfaction of lien from each Lienor performing the Work to ensure that all Lienors have waived and relinquished any and all liens or lien rights which said parties may have for the furnishing of labor, materials or services through the date of the particular Payment Request. All such affidavits, lien waivers and satisfactions shall be in form and content acceptable to Owner in its sole discretion. Owner shall have the right at any time to pay any Lienor (either directly or by joint or multiple party check) and deduct the payment from the remaining sums due to Contractor, unless Contractor has first delivered written notice to Owner of a dispute with any such Lienor and has furnished a bond or other security satisfactory to Owner insuring against claims therefrom. Endorsement by a payee of a joint or multiple party check shall be deemed payment to that party for the full amount of the check. Contractor waives the right under the Florida Construction Lien Law to receive ten (10) days prior written notice from Owner of Owner's intention to pay any such party directly.

**ARTICLE 10. Final Payment:** Upon final completion of the Work and written acceptance of the Work by Owner and the issuance of all necessary governmental approvals, licenses, operating permits or other applicable approvals for the Work, Contractor shall be entitled to apply for the final payment ("Final Payment") of all remaining sums due to Contractor under the Contract, including any retainage not previously disbursed. As a further condition precedent to receiving the Final Payment, Contractor shall (i) furnish to Owner a final contractor's affidavit verifying that the Work has been completed in accordance with the Contract and that all Lienors performing any portion of the Work have been paid in full, accompanied by a final lien waiver and release of lien duly executed by Contractor and each Lienor performing any portion of the Work, all in a form prescribed by Owner, and containing such terms and provisions as Owner deems necessary or desirable in its sole discretion to ensure lien-free completion of the Work, (ii) deliver to Owner all warranties required by the Contract or the Plan and Specifications, and (iii) provide Owner, at Contractor's expense, with accurate and complete information which Owner deems necessary or desirable to document completion of the Work (including any and all changes made in the field). Contractor's acceptance of the Final Payment shall constitute a waiver by Contractor of all claims against Owner which are unsettled at the time of the making of the Final Payment. Owner shall have thirty (30) days to make the Final Payment after all conditions precedent to Final Payment are fulfilled. Contractor waives all rights to require early disbursement of retainage under the Florida Construction Prompt Payment Law.

ARTICLE 11. **Owner's Right to Withhold Payments:** Progress Payments may be withheld on account of (i) defective work not remedied, (ii) liens filed or threatened against the Project with respect to the Work, (iii) failure of the Contractor to make payments properly to any Lienors, (iv) failure of the Contractor to properly submit complete, detailed and verified Payment Requests in such form and content as Owner may reasonably require, (v) failure to submit all required lien waivers and releases, (vi) reasonable evidence that the Work or any portion thereof cannot be completed on or before the Completion Date, or (vii) failure of Contractor to otherwise carry out the Work in accordance with the Contract or the schedule. If Owner withholds payment of any amounts because of a bona fide dispute with Contractor as to whether or not such payment is due or as to the amount thereof, Contractor shall remain obligated to diligently pursue and complete the Work regardless of any such dispute and Contractor shall not delay the Work by reason of the Owner's failure to make such payment.

ARTICLE 12. **Application of Payments:** Contractor shall apply all payments received under the Contract to the payment of amounts owed for labor, materials or services which were furnished for the Work. All such funds paid to Contractor shall be held in trust for payment of all Lienors and neither Contractor nor any other Lienor shall use such funds for any other purpose. In the event any liens are filed against the Property as a result of the Work and are not satisfied of record within three (3) calendar days of Owner's notice to the Contractor of the existence of such lien, Owner shall have the right to settle, satisfy or bond-off such lien at Contractor's cost and expense and off-set the same against the next Progress Payment(s) (including the Final Payment and all retainage) due to Contractor under the Contract.

ARTICLE 13. **Taxes:** Contractor shall be solely responsible for the payment of all of taxes, withholdings and contributions required of Owner or Contractor by the Federal Social Security Act and the Unemployment Compensation Law or other similar state or federal laws, with respect to contractor's employees or others employed, directed or contracted for by Contractor in the performance of the Work. Contractor shall pay all sales taxes, use taxes, excise taxes or similar taxes which may now or hereafter be assessed against the labor, material or services used or employed by Contractor or others in the execution of the Contract or the completion of the Work.

ARTICLE 14. **Examination of Site and Technical Specifications:** Contractor waives all claims that the site and existing conditions (if any) are not in accordance with the Technical Specifications and all bid documents. If, prior to submitting a bid, Contractor fails to properly review the Technical Specifications and other bid documents to discover any deficiencies affecting the Work and subsequently discovers any such deficiencies while performing the Work, Contractor shall be obligated to immediately notify Owner in writing of such deficiencies and shall promptly correct the same without any increase in the Contract Price and without any extension of the Completion Date. Owner expressly disclaims any warranties, expressed or implied, of the suitability of the site for the construction of the Work or the suitability of the Technical Specifications for their intended purpose. Contractor hereby waives any claims for damage, additional compensation or delay based upon any deficiencies in the Technical Specifications.

ARTICLE 15. **Changes in the Work:** Owner may, without invalidating the Contract, order additions, deletions or modifications of the Work from time to time (hereinafter referred to as a "Change Order"). All Change Orders must be in writing and signed by Owner in order to be binding on Owner. Contractor shall not make any alterations in the Work, including modifications necessitated by applicable codes, laws, rules or regulations, unless documented by a Change Order. Contractor shall not be entitled to any increase in the Contract Price or any extension of the Completion Date in connection with any Change Orders due to alterations which are the responsibility of Contractor hereunder. All other Change Orders shall specify the adjustment, if any, which is to be made in the Contract Price or the Completion Date. All alterations approved by Owner shall be subject to all of the terms of the Contract. Owner shall determine all permitted adjustments in the Contract Price by a Change Order specifying a fixed sum executed by Owner and accepted by Contractor. Contractor shall not be entitled to any extension of the Completion Date or increase in the Contract Price unless approved by a Change Order. Owner may unilaterally issue Change Orders to document any adjustment in the Contract Price due to offsets or deductions permitted by the Contract.

ARTICLE 16. **Delays:** If the Contractor is delayed at any time in the progress of the Work by changes ordered in the Work by Owner, fire, adverse weather conditions which can not reasonably be anticipated (normal rain delays already being contemplated in determining the Completion Date), unavoidable casualty or similar causes beyond the Contractor's control, then the Completion Date shall be extended by Change Order for such reasonable time as the Owner may determine. Any claim by Contractor for an extension of the Completion Date shall be made in writing to the Owner not more than twenty-four (24) hours after the commencement of the delay, otherwise the claim for extension shall be waived. In the case of a continuing delay only one claim is necessary. Contractor shall identify with specificity the cause of the delay and shall provide an estimate of the probable effect of such delay on the progress of the Work. Any claim for delay by the Contractor shall only serve to extend the Completion Date and shall not entitle the Contractor to any increase in the Contract Price, except as specified in Article 8 above. All other claims for damages due to delays in the Work are hereby waived by Contractor even if caused in part by Owner's or a separate contractor's negligent actions or omissions.

ARTICLE 17. **Indemnification:** The Contractor agrees to indemnify and hold harmless the Owner, its officers, agents and employees, free and harmless from any claim, liability, cause of action, expense or charge, of whatever kind or nature, including, but not limited to, personal injury, loss of life, property damage including loss of use thereof, and against all loss of life, which may arise out of or be connected with the performance of contractor's duty hereunder, and shall indemnify the Owner against any suits, actions, claims, damages, or causes of action brought by or on behalf of any person arising out of the performance of such duties, and pay all costs and expenses in connection therewith. Nothing in this Contract shall be construed to affect in any way the Owner's rights, privileges, and immunities as set forth in Florida Statutes 768.28.

ARTICLE 19. **Insurance:** The Contractor, at Contractor's expense shall maintain the following insurance coverages until acceptance of the Work by the Owner.

A. Workers' Compensation-Statutory:

Policy must include Employers Liability: \$100,000 for each accident, \$500,000 disease (policy limit), and \$100,000 disease (each employee).

B. Commercial General Liability:

\$1,000,000 per occurrence Combined Single Limit for bodily injury and property damage. Policy shall include coverage for premises/operations; products/completed operations; contractual liability; independent contractors.

C. Business Auto Liability:

\$1,000,000 per occurrence Combined Single Limit for bodily injury and property damage. Policy shall include coverage for owned auto; hired autos; non-owned autos.

The CRA and the Town of Davie are to be named as additional insureds on both the general liability and auto liability policies. These policies shall provide that the CRA and the Town be given thirty (30) days advance notice prior to cancellation or reduction in coverages.

ARTICLE 20. **Warranty of Work:** In consideration of the Contract Price the Contractor hereby provides a warranty for the Work as follows: such warranty includes, without limitation, all statutory warranties which may run from Owner to the ultimate purchaser within the Project and additionally includes an implied warranty of merchantability and fitness for a particular purpose; Contractor warrants the Work will function for the purpose it was designed or intended; Contractor warrants that it will make repairs to the Work in a timely fashion and at its sole expense; Contractor warrants that all labor, material, equipment and supplies furnished and the Work completed pursuant to the Contract will be new, of the highest quality, free from faults and defects and in conformance with the Contract; Contractor warrants that the Work will be free from any contamination by hazardous waste or other hazardous or toxic materials of any kind, including, without limitation, asbestos, PCB's and other toxic or hazardous chemicals or materials; Contractor warrants that in case of emergencies, Contractor, within twenty-four (24) hours of notice (verbal or written), shall diligently and continuously pursue any necessary repairs or replacements of defects until corrected and will restore the Work to the condition required by the Contract; Contractor shall restore both surface and subsurface, both collateral and primary, conditions disturbed during warranty work to their prior state; Contractor agrees that if Contractor, upon five (5) days notice by Owner fails to diligently pursue correction of any deficiency in a continuous and expeditious manner until completion, Owner may, in its sole discretion, act to have such deficiencies corrected at Contractor's expense and such efforts by

Owner shall not invalidate any conditions of the Contract or invalidate the on-going warranty obligations of Contractor; Contractor shall indemnify and hold harmless Owner from any claims, loss, damage or expense due to defects in the Work; and, if Contractor can in a definite and ascertainable method demonstrate that a deficiency was caused by an adverse and abusive action of Owner, then Contractor shall still be obligated to correct the deficiency, but shall be entitled to fair compensation for its direct cost of repairs thus made; and Contractor's warranty obligations hereunder shall survive completion of the Work and any termination of the Contract and are incorporated into Contractor's final contractor's affidavit for the Work by reference herein.

ARTICLE 21. **Standards of Workmanship**: The Work shall meet the requirements of the Technical Specifications and the standards generally accepted by the local industry.

ARTICLE 22. **Labor Disputes**: In the event of any labor dispute, regardless of whether or not Contractor caused and/or is directly involved therewith, and regardless of the reason for the labor dispute, Contractor agrees to perform the Work as scheduled. Any such labor dispute shall not be deemed an excuse by Contractor for failure to perform. As used herein, labor dispute shall be deemed to include any strike or refusal to cross any picket line by any laborer or any other person regardless of the person, company or employee to which such action is directed. Labor disputes shall also include any stoppage, abandonment, interference or any interruption of the Work by any person, labor organization, company or others.

ARTICLE 23. **Signs**: Without the prior written consent approval of Owner (which consent Owner is not obligated to give), neither Contractor nor any of its affiliates shall publicly advertise the fact that Contractor is constructing the Work in connection with the Project. Further, Contractor shall not erect any sign or other advertisement at the Project.

ARTICLE 24. **Compliance with OSHA and EEOC**: Contractor agrees to observe and strictly adhere to the provisions of the Occupational Safety and Health Act, and any other similar laws, rules or regulations enacted by federal, state or local authorities, as the same may be amended, interpreted or enforced from time to time. Contractor shall also comply with all laws, procedures, rules and regulations promulgated by the Equal Employment Opportunity Commission or other authority with regard to non-discrimination as the same apply to the Work.

ARTICLE 25. **Default and Termination**: Each of the following occurrences shall constitute an event of default ("Event of Default") by Contractor under the Contract: (i) a breach by Contractor of any covenant, warranty or Contract contained in the Contract or any covenant, warranty or Contract contained in any other Contract or Contract between Owner and Contractor (or an affiliated company) which remains uncured for five (5) days after notice from Owner, (ii) the commencement of any proceedings by or against Contractor, as debtor, under any applicable insolvency, receivership or bankruptcy laws, or (iii) a work stoppage due to strike, boycott, labor dispute, governmental moratorium, material shortage or similar causes beyond the control of Owner. At any time after the occurrence of an Event of Default, Owner shall be entitled to do any one or more of the following: (i) suspend further payments to the Contractor until the Work is completed, (ii) terminate the Contract without waiving the right to recover damages against Contractor for its breach of the Contract, (iii) obtain specific performance of the Contractor's obligations under the Contract, (iv) obtain any other available legal or equitable remedies, or (v)

provide any labor, material or services required to complete all or a portion of the Work by any method the Owner may deem expedient, without terminating the Contract, and deduct or offset the cost thereof (including compensation for Owner's increased administrative expenses) from any sums then or thereafter due to Contractor under the Contract or under any other Contract or Contract between Owner and Contractor (or any affiliated company); provided, however, that if such cost shall exceed the unpaid balance of the Contract Price, Contractor shall immediately pay the difference to Owner upon demand (which sum shall bear interest at the highest lawful rate until paid). In all such events Owner shall have the right to enter upon the premises and take possession of all materials and supplies, for the purpose of completing the Work, and may employ any other person or persons to finish all or a portion of the Work and provide the materials therefore. Contractor grants Owner a lien and security interest in all materials and supplies, of Contractor located on the Project to secure performance of Contractor under the Contract.

Additionally, Owner shall have the right at any time, whether or not Contractor or Owner shall then be in default under the Contract, to terminate the Contract without cause and for Owner's convenience by giving Contractor forty-eight (48) hours written notice of such termination. Upon receipt of such notice, and unless otherwise directed, Contractor shall immediately discontinue prosecution of the Work and the placing of orders for materials, equipment, labor, machinery and supplies and shall, if requested, use its best efforts to cancel all existing orders or contracts upon terms satisfactory to Owner. Thereafter, Contractor shall do only such work as is necessary to protect and preserve Work in place or stored on site. On the date designated by Owner for termination, the obligations of Owner and Contractor to continue performance shall cease and Owner shall within forty-five (45) days thereafter pay Contractor the following sum ("Termination Fee"): (i) all unpaid sums due to Contractor for direct hard costs of construction (including labor costs) through the date of termination, including any retainage, plus (ii) payment for any bona fide obligations assumed by Contractor in furtherance of the Contract prior to receipt of the termination notice and which cannot be cancelled after all diligent efforts, but only to the extent such materials or benefits are validly transferred to Owner free and clear of all liens, claims or offsets, and (iii) a proportionate share of Contractor's general conditions, profit and overhead (to the extent not previously paid or advanced), but less any costs for which Contractor is responsible under the Contract. In the event of a default by Owner, Contractor's sole and exclusive remedy shall be to seek payment of the Termination Fee as agreed and liquidated damages. Contractor acknowledges and agrees that the Termination Fee will be just and adequate compensation for such default by Owner or termination for Owner's convenience, it being difficult, if not impossible, to determine the actual damages incurred by such default or termination, and Contractor waives the right to seek, at law or in equity, any other damages or remedies for such termination or default by Owner, whether direct, consequential or punitive. In consideration of the first one thousand dollars (\$1,000.00) of the Contract Price and as independent contractual covenant of Contractor, Contractor agrees that upon any termination or cancellation of the Contract, or at such earlier time as requested by Owner, Contractor will immediately transfer and assign all permits and inspection certificates held by Contractor to Owner or Owner's designee, at no cost to Owner, regardless of whether Owner has defaulted under the Contract.

ARTICLE 26 **Liquidated Damages** The Owner shall assess a one hundred (\$100.00) dollar per day liquidated damage cost for every day the Project exceeds the Completion Date shown on **Exhibit "C"**. These costs will be levied in all cases except for those extensions approved by the Owner. Liquidated Damages will be received for each day of the Completion Date, Sundays and Holidays included, that the Work remains uncompleted. These amounts shall represent the actual damages which the Owner has sustained per day by failure of the Contractor to complete the Work within the time stipulated and shall not be construed as a penalty.

ARTICLE 27 **Clean-Up and Preservation**: Contractor agrees to remove from the Project, as often as directed by Owner, all rubbish, debris and surplus material which may accumulate from the prosecution of the Work. Contractor, at its expense, agrees to remain responsible for the preservation and protection of the Work during any work stoppages or delays and further agrees to protect the Work from deterioration and/or damage until such time as the Work is accepted in writing by Owner and the Final Payment is made. Owner's acceptance of the Work shall not constitute a waiver of any claims for defective or non-complying Work.

ARTICLE 28. **Safety and Use of Site**: Contractor shall be responsible for initiating, maintaining and supervising all safety precautions in connection with the Work. Contractor, at Contractor's expense, shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to (i) all employees performing the Work and other persons who may be affected thereby, (ii) all of the Work and all materials and equipment to be incorporated therein, and (iii) other property at the site or adjacent thereto. Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and orders of any public authority relating to the safety of persons and properties and their protection from damage, injury or loss. Contractor shall promptly remedy all damage or loss to any property caused in whole or in part by Contractor, any subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The areas of the Project which may be used by Contractor are limited and shall be approved by Owner and any authority having jurisdiction over the site before Contractor commences the Work. Owner shall have the right to reasonably change the location of such areas from time to time upon notice to Contractor. Contractor shall use its best efforts to ensure at all times that any and all conservation areas or nature preserve areas located in or adjacent to the Project are not entered or disturbed, except when authorized by Owner and that all vehicles (whether Contractor's, or any others performing the Work) are to be parked, and all equipment and materials are to be kept, at all times, on site and that adequate security shall be provided for the job site to protect against trespassing, theft, vandalism, breakage and damage.

ARTICLE 29. **Conduct of Workmen**: Contractor shall be responsible for the proper behavior and conduct of all persons performing the Work and shall be responsible for removing from the job site any workmen whose behavior is disruptive to the orderly progress of the Work. No alcoholic beverages of any kind are to be consumed on the job site and no habit forming or illegal drugs are to be brought on the job site or used by any workmen. No radios or other sound-producing devices shall be used in a manner which annoys or disturbs others performing work. Any workmen found to have violated said regulations shall be immediately replaced by Contractor. Any breach of this paragraph will be grounds for immediate termination of the Contractor.

ARTICLE 31. **Notices.** All notices to be given hereunder shall be in writing and personally delivered, or sent by registered or certified mail, return receipt requested, or sent by telefax with copy by mail, or delivered by an overnight courier service utilizing return receipts to the parties at the following addresses (or to such other or further addresses as the parties may designate by like notice similarly sent) and such notices shall be deemed given and received for all purposes under this Agreement three (3) business days after the date same are deposited in the United States mail, if sent by registered or certified mail, or the date actually received if sent by personal delivery or overnight courier service, or on the date of transmission with confirmed answer back if by telefax if transmitted before 5:00 p.m. on a business day, and on the next business day if transmitted after 5:00 p.m. or on a non-business day, except that notice of a change in address shall be effective only upon receipt.

If to the CRA:

TOWN OF DAVIE  
COMMUNITY REDEVELOPMENT AGENCY  
Attn: Redevelopment Administrator  
3921 S.W. 47<sup>th</sup> Avenue  
Suite 1008  
Davie, Florida 33314  
Telephone No. (954) 797-2093  
Fax No. (954) 797-1200

If to the Contractor:

GEOTECH ENVIRONMENTAL, INC.  
7737 N. University Drive  
Suite 206  
Tamarac, Florida 33321  
Telephone No. (954) 597-9100  
Fax No. (954) 597-9191

ARTICLE 32. **Arbitration:** All claims or disputes between Owner and the Contractor arising out of or relating to the Project or any Contract, or the breach thereof, shall be decided by arbitration in accordance with the expedited construction industry arbitration rules of the American Arbitration Association currently in effect unless the parties mutually agree otherwise. Notice of the demand for arbitration shall be filed in writing with the other party and with the American Arbitration Association and shall be made within a reasonable time after the dispute has arisen. The award rendered by the arbitrator(s) shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof. Except by written consent of the person or entity sought to be joined, no arbitration shall include by consolidation, joinder or in any other manner, any person or entity not a party to the Contract under which such arbitration arises, unless it is shown at the time the demand for arbitration is filed that (i) such person or entity is substantially involved in a common question of fact or law, (ii) the presence of such person or entity is required if complete relief is to be accorded in the arbitration, and (iii) the interest or responsibility of such person or entity in the matter is not



insubstantial. This Contract to arbitrate shall be specifically enforceable in any court of competent jurisdiction.

ARTICLE 33 **Public Entity Crime Information** A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months for the date of being placed on the convicted vendor list.

ARTICLE 34. **Miscellaneous:**

- (a) Time is of the essence for all Contractors' obligations under the Contract.
- (b) Contractor shall not pledge, transfer, encumber or assign its rights under the Contract or any part thereof or interest therein.
- (c) Only the Owner, the Contractor and any indemnified parties described in the Contract shall be entitled to the benefits of the Contract, and no other party shall be deemed a third-party beneficiary under the Contract nor be entitled to enforce the terms of the Contract.
- (d) In the event any term or provision of the Contract is determined by an appropriate judicial authority to be illegal or otherwise invalid, such provision shall be given its nearest legal meaning or be construed as deleted as such authority determines, and the remainder of the Contract shall be construed to be in full force and effect. The Contract shall be governed and construed in accordance with the laws of the State of Florida and the Contractor submits to the jurisdiction of the state and federal courts in and for the County in which the Project is located and waives any claim that the same is an inconvenient forum.
- (e) The Contract contains the entire Contract and understanding between Owner and Contractor and there are no representations, warranties or Contracts other than those contained in the Contract. All negotiations and Contracts, oral or written, relating to the Work prior to the date of the Contract are superseded and replaced by the terms of the Contract. Any additions, modifications or changes to the Contract must be in writing and signed by the party against whom enforcement is sought.
- (f) No provision of the Contract shall be deemed to have been waived by Owner, either expressly, impliedly or by course of conduct, unless such waiver is in writing and signed by Owner, which waiver shall apply only to the matter described in the writing and not to any subsequent rights of Owner.

(g) The prevailing party in any litigation arising under the Contract shall be entitled to reimbursement of all attorneys' fees and costs incurred at all trial and appellate levels, including any bankruptcy proceedings.

(h) The Contract may not be recorded in the Public Records and any such recording by Contractor shall be deemed a material default. In interpreting the Contract, the singular shall be held to include the plural, the plural shall include the singular, and the use of any gender shall include every other and all genders, and captions and paragraph headings shall be disregarded. The Contract shall not be more strictly construed against either party hereto.

(i) All indemnities, representations, warranties and waivers made by Contractor in favor of Owner, its agents, employees, successors or assigns, shall survive completion of the Work, the making of the Final Payment and any cancellation or termination of the Contract.

(j) All of the exhibits attached to these general conditions are incorporated in and made a part of the Contract.

**ARTICLE 34. WAIVER OF JURY TRIAL: OWNER AND CONTRACTOR HEREBY KNOWINGLY, IRREVOCABLY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY RIGHT EITHER MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY ACTION, PROCEEDING OR COUNTERCLAIM BASED UPON THE CONTRACT OR ARISING OUT OF, UNDER, OR IN CONNECTION WITH THE CONSTRUCTION OF THE WORK OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER VERBAL OR WRITTEN) OR ACTIONS OF ANY PARTY.**

**IN WITNESS WHEREOF**, the parties hereto have executed these general conditions as of the date first above written.

THE TOWN OF DAVIE COMMUNITY  
REDEVELOPMENT AGENCY

Attest:

By: \_\_\_\_\_  
Its Chair

GEOTECH ENVIRONMENTAL, INC.

Witnesses: Will Allen  
Will Allen

Print Name:

Witnesses: Cheryl E. Ellett  
Cheryl L. Ellett  
Print Name

By: NL 9/6/2007  
Name: NILESH LAKHANI  
Title: PRESIDENT,

## **EXHIBIT "A"**

### **GENERAL CONDITIONS**

#### **PERMITS**

The Contractor shall be fully responsible for the performance of its company and completion of all work as outlined in these specifications including obtaining all applicable permits and maintenance of permit conditions.

#### **WORK HOURS**

Hours shall be in accordance with Town of Davie regulations and shall be limited unless otherwise indicated to daylight hours from Monday through Saturday.

#### **OBSTRUCTIONS**

The attention of the Contractor is drawn to the fact that during remediation at the Project site, the possibility exists of the Contractor encountering various water, sewer, petroleum, gas, telephone, electrical or other lines. The Contractor is required to contact the Sunshine State One Call prior to beginning work onsite. The Contractor shall exercise extreme care before and during remediation to locate and flag these lines so as to avoid damage to the existing lines. Should damage occur to an existing line, the Contractor shall repair the line at no cost to the CRA.

#### **PROVISIONS FOR THE CONTROL OF DUST**

Sufficient precautions shall be taken during remediation to minimize the amount of dust created. Wetting down the site may be required or other appropriate techniques as directed to prevent dust as a result of land clearing, excavation or vehicular traffic.

#### **HURRICANE PERPAREDNESS PLAN**

The Contractor shall submit a Hurricane Preparedness Plan if the CRA so requests. The plan should outline the necessary measure which the Contractor proposes to perform at no additional cost to the CRA in case of a hurricane warning.

In the event of inclement weather, or whenever CRA shall direct, Contractor will cause Subcontractors to protect carefully the Work and materials gains damage or injury

from the weather. If, in the opinion of the CRA, any portion of Work or materials shall have been damaged or injured by reason of failure on the part of Contractor or any Subcontractor to so protect the Work, such Work and materials shall be removed and replaced at the expense of the Contractor.

### **DISPOSAL**

The Contractor will be required to document all disposal locations to certify that disposal complies with all State, County and local laws.

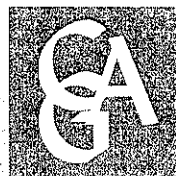
# Technical Specifications for Site Remediation

Prepared for:

Mr. Will Allen  
Town Redevelopment Administrator  
Town of Davie  
4700 Southwest 64<sup>th</sup> Avenue, Suite C  
Davie, FL 33314

CGA Project # 06-5789

Prepared by:



Calvin, Giordano & Associates, Inc.  
Engineers • Surveyors • Planners

1800 Eller Drive, Suite 600  
Fort Lauderdale, Florida 33316  
Phone: 954 921 7781 Fax: 954 921 8807

June 2007

# Exhibit A

## Technical Specifications for Site Remediation

### Background

The subject site is located at or near 4493 SW 64<sup>th</sup> Avenue, in the Town of Davie, in Broward County, Florida. Aerial photos depict the property as a gas station from the early 1970s. A discharge associated with five (5) underground storage tanks was filed in 1988. The site was eligible for the state Early Detection Incentive Program (EDI) and was assigned a low priority ranking score of 12. The underground storage tanks (USTs) were removed in 1990. To determine if the soil and groundwater had been deleteriously impacted by the former gas station activities on the site, the Town of Davie contracted EPAC Environmental Services, Inc., to conduct a Phase I and II Site Assessment to investigate the soil and groundwater within the former UST area. On November 18, 2005, EPAC installed two (2) groundwater monitoring wells and obtained two (2) soil borings. The subsurface assessment also included the sampling and analysis of an existing well. The laboratory analysis indicated the presence of petroleum constituent concentrations above the Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Levels and above the FDEP Soil Cleanup Target Levels.

### Remediation Process Overview

Site rehabilitation cannot be compelled for a discharge that is eligible for State restoration funding assistance in advance of commitment of restoration funding. However, real property owners of sites may voluntarily elect to complete site rehabilitation using the appropriate provisions. The Florida Statutes, the Florida Administrative Code and the Broward County Code of Ordinances have detailed guidelines and specifications on how each item of remediation work is to proceed. These must be followed in order to satisfy the requirements of the FDEP and the EPD. The final goal of assessment and remediation at a site is to achieve a No Further Action (NFA) status. Table 1 *Applicable Regulations*, identifies the applicable regulations.

TABLE 1. APPLICABLE REGULATIONS		
<b>Florida Statutes</b>		
Chapter	376	Pollutant Discharge Prevention and Removal
<b>Florida Administrative Code</b>		
Chapter	62-701	Solid Waste Management Facilities
	62-730	Hazardous Waste
	62-770	Petroleum Contamination Site Cleanup Criteria
	62-777	Contaminant Cleanup Target Levels
<b>Broward County Code of Ordinances</b>		
Chapter	27	Pollution Control

# Petroleum Contamination Site Cleanup Process

Upon completion of the Site Assessment, the Site Assessment Report shall summarize all tasks that were implemented pursuant to Rule 62-770.600(3) and 62-770.600(4) F.A.C., and summarize the results. The conclusions will be summarized regarding the site assessment objectives and will include a recommendation to prepare a *Remedial Action Plan* or else a *Natural Attenuation Monitoring Plan* or a *No Further Action Proposal*. EPAC had indicated active remediation and post active remediation monitoring as the recommended course of action for the subject site. *Natural Attenuation Monitoring* and the *No Further Action Proposal* alternative processes are outlined at the end of this report to provide supplemental information.

## **Step One: Initial Meeting with Broward County EPD**

### **Work Plan:**

The first step in the remediation process is to set up a coordination meeting with the Broward County Environmental Protection Department (EPD), Pollution Prevention and Remediation Division, Environmental Assessment and Remediation Section Manager, Mr. Lorenzo Fernandez. His office can be contacted at 954-519-1260. The Florida Department of Environmental Protection (FDEP) has contracted EPD to assist in the administration of petroleum contamination site cleanup. A **Draft Source Removal Plan** should be prepared and submitted to the EPD for review and approval for additional guidance on removal activities. The EPD will designate a staff person to the project. Through this meeting and contact, and prior to any activities occurring, the required permits, project schedule and necessary processes will be confirmed. Ongoing communication with the EPD is a key component to successful site cleanup.

The Town of Davie requires a **Site Development Permit** for work such as earth movement, fill work, etc.

One guideline to note is the notice of field activities. The Contractor is required to provide written notice to the EPD at least three (3) days prior to performing field activities such as interim source removal activities, installing monitoring or recovery well(s), performing sampling, installing remediation equipment, or installing an engineering control. In addition, any modifications to any of the forms, applications or plans must be approved by the EPD in a timely manner. Chapter 62-770 has detailed guidelines for both quality assurance requirements and professional certifications (Chapters 62-770.400 and 62-770.490).

## **Step Two: Interim Source Removal (Rule 62-770.300, F.A.C.)**

The primary objective of Interim Source Removal is the excavation of contaminated soil for proper treatment or proper disposal. A short-term groundwater recovery event may also be performed as an interim source removal activity.

### **Work Plan:**

For short-term groundwater recovery as a source removal activity, sampling of representative monitoring wells to determine the effectiveness of the recovery shall be performed at least 30 days after completion of the groundwater recovery.

For excavation of all the contaminated soil as a source removal activity, confirmatory soil samples shall be collected at the bottom of the excavation (unless the bottom is below the water table) and walls or perimeter of the excavation. The Contractor must comply with all rules regarding product recovery, product disposal, groundwater recovery, or the handling, storage, disposal, or treatment of contaminated media. Soil treatment, storage, or disposal techniques not authorized by the applicable regulations requires approval in a Remedial Action Plan.

The excavation of contaminated soil for proper treatment or for proper disposal may be performed prior to regulatory approval under specific conditions, including:

- Contamination is not spread into previously uncontaminated areas,
- Flammable products are handled in a safe manner,
- Excavated and stockpiled soils are secured in a manner that prevents exposure of contaminated soil to receptors and precipitation,
- The excavation pit is secured to prevent accidental or intentional entry by the public,
- Excavated soil is not to be stored or stockpiled on site beyond certain time limits,
- Contaminated soil is treated or disposed of in accordance with all applicable FDEP and local rules and regulation, and

### **EPD Reporting:**

- Within 10 days after initiation of product recovery, the Contractor shall provide written notification to the EPD on Form 62-770.900(1).
- Within 60 days of completion of interim source removal activities, two (2) copies of an **Interim Source Removal Report** must be submitted to the EPD for review. (If analytical results obtained demonstrate that No Further Action (NFA) criteria are met, a Site Assessment Report may be submitted in lieu of the Interim Source Removal Report.) The Interim Source Removal Report shall meet the criteria listed in Rule 62-770.300(5), F.A.C.

### **Timeline:**

Regulatory review of the Interim Source Removal Report or a Site Assessment Report is 60 days.



### **Step Three: Site Assessment (Rule 62-770.600, F.A.C.)**

The primary objectives of a site assessment are to:

- Characterize the surface and subsurface geology, soil lithology, and hydrogeology of a site,
- Determine the horizontal and vertical extent of contamination in soil, groundwater, and surface water, and
- Assess the potential threats of contamination to human and ecological receptors.

#### **Work Plan:**

Many tools may be used by trained and certified personnel to determine the degree and extent of contamination and the background concentrations; including monitoring wells, water level indicators, direct push rig, hand auger, drill rig, flame ionization detector, gas chromatograph, and peristaltic pump. The tasks necessary to achieve the objectives of the site assessment may include, but are not limited to, sampling of undisturbed soil above and below the water table, use of field soil screening techniques, sampling of soil from the unsaturated and saturated zones, sampling of surface water and sediment for the appropriate laboratory analyses, and inspection of public records. The tasks may also include sampling of monitoring wells for the appropriate laboratory analyses, with the most recent sampling of representative monitoring wells having occurred no more than 270 days prior to submittal of the Site Assessment Report.

The Site Assessment Report shall summarize all tasks that were implemented pursuant to Rule 62-770.600(3) and 62-770.600(4) F.A.C., and summarize the results obtained. The conclusions will be summarized regarding the site assessment objectives and will include either a *Natural Attenuation Monitoring Plan* a *No Further Action Proposal* or a recommendation to prepare a *Remedial Action Plan* (Step Four).

To facilitate the site assessment process, the Contractor may have discussions with the EPD at various decision points to establish the scope and methodology of the site assessment, applicable exposure factors, the remedial strategy for the site, and the risk management options based on the current and projected land use(s) at the site.

#### **EPD Reporting:**

- Two copies of a Site Assessment Report shall be submitted that meet the criteria listed in Rule 62-770.600(8), F.A.C.

**Timeline:** Regulatory review of Site Assessment Report is 60 days.

#### **Step four: Active Remediation (Rule 62-770.700, F.A.C.)**

Prior to construction and/or implementation, a Remedial Action Plan (RAP) must be approved by the EPD. The RAP must be certified by a Florida Professional Engineer and must propose and justify the use of a particular remediation strategy. The decision to use a remediation strategy in order to “actively” clean up contamination at a site may depend on one or more of several factors, including:

- Concentrations of contaminants in site soil and groundwater (Standards Chapter 62-777, F.A.C.).
- Proximity of the contamination to potential exposure routes such as drinking water wells and surface water bodies.
- Current and projected future use (including sale or development) of the property.
- Liability associated with contaminant migration and impacts to surrounding property.

**Work Plan:** The Remedial Action Plan shall provide a design that addresses cleanup of all soil, sediment, groundwater, or surface water found to be contaminated. Actual remediation strategies can include air stripping, bioremediation, chemical treatment, air sparging/soil vapor extraction and excavation and treatment or disposal. For the subject site, EPAC recommends air stripping as the remediation methodology. Air stripping is a treatment process whereby contaminated groundwater is pumped from the subsurface and then exposed to a flow of air. By greatly increasing the surface area of contaminated water exposed to air, dissolved volatile chemicals are removed from the water and transferred to the air.

When groundwater contamination is present, the RAP shall include results from a round of groundwater sampling and analyses from a number of monitoring wells adequate to determine the highest concentrations of petroleum products’ contaminants of concern, to verify the horizontal and vertical extent of the plume, and to provide design data for the RAP. The sampling and analyses shall be performed after approval of the Site Assessment Report, unless the most recent groundwater analytical results submitted in the approved Site Assessment Report are from a round of groundwater sampling and analyses performed less than 270 days prior to the submittal of the Remedial Action Plan.

#### **Reporting:**

- The Remedial Action Plan shall include all items listed in Rule 62-770.700(3), F.A.C. The remedial action plan summary form [Form 62-770.900(4)] shall also be completed and submitted as part of the Remedial Action Plan. Prior to implementation of the Remedial Action Plan, the Contractor shall obtain all applicable permits or authorizations required for site rehabilitation activities. During active remediation, the criteria in Rule 62-770.700, F.A.C. shall be met.
- If the air stripping method is utilized and mass of total petroleum hydrocarbons exceeds 13.7 pounds per day, an Application to Construct/Operate Air Pollution Source must be prepared and submitted for \$180,000 to the EPD prior to any remedial activities at the site.
- Within 120 days of initiating operation of the active remediation system, the Contractor shall submit to the EPD two copies of engineering drawings with a summary of the system startup activities attached.
- Two copies of status reports of remedial action shall be submitted within 60 days after the anniversary date of initiating operation of the active remediation system and shall contain the items listed in Rule 62-770.700(13), F.A.C. The items listed in Rule 62-770.700(11) shall be obtained or determined during active remediation.

- When the No Further Action criteria or the leveling off criteria have been met, the Contractor shall submit to the EPD for review two copies of a **Post Active Remediation Monitoring Plan** prepared pursuant to the Post Active Remediation Monitoring criteria. If the EPD agrees that groundwater sampling is unnecessary and the site meets the No Further Action criteria, a Site Rehabilitation Order shall be issued.

**Timeline:** Remedial Action Plan to be submitted within 90 days of approval of a Site Assessment Report. Regulatory Review of Remedial Action Plan is 60 days. Construction and Initiation of Active Remediation System or Strategy within 120 days of approval of Remedial Action Plan.

## **Step Five: Post Active Remediation Monitoring (Rule 62-770.750, F.A.C.)**

The purpose of post active remediation monitoring is to ensure that contaminant concentrations do not rebound above applicable standards. In the event that contaminant concentrations do increase beyond acceptable levels, the remediation system may need to be reactivated. If applicable standards are still met after the required post active remediation monitoring period is complete, a site may be eligible for No Further Action.

### **Work Plan:**

Following the discontinuation of an active soil or groundwater remediation system, groundwater monitoring must be performed for a minimum of one (1) year (unless contamination was only present in the unsaturated zone). A minimum of two monitoring wells is required. The designated monitoring wells shall be sampled quarterly for analyses of applicable petroleum products' contaminants of concern that were present prior to the initiation of active remediation. Water-level measurements in all designated wells and piezometers shall be made within 24 hours of initiating each sampling event.

A minimum of four groundwater sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria have been met for at least the last two quarterly or semiannual sampling events. However, if contamination was only present in the unsaturated zone during the site assessment and active remediation tasks, site rehabilitation shall be considered complete when the No Further Action criteria are met during only one sampling event.

### **Reporting:**

- Groundwater monitoring shall be performed following the completion of active groundwater remediation or soil remediation unless the EPD has concurred that groundwater sampling is unnecessary based on the site-specific conditions. When active groundwater remediation has met the No Further Action criteria or the leveling off criteria Chapter 62-770.700 (19), F.A.C., the Contractor shall submit to the EPD for review two copies of a **Post Active Remediation Monitoring Plan** including analytical results demonstrating this conclusion. The monitoring program shall be performed as specified in the Post Active Remediation Monitoring Plan approval in Rule 62-770.750(5) F.A.C.
- Within 60 days of sample collection, the Contractor shall submit to the EPD for review two copies of a **Post Active Remediation Monitoring Report**.
- When post active remediation monitoring is considered complete, the Contractor shall submit to the EPD for review two copies of a **Site Rehabilitation Completion Report** with a No Further Action Proposal. The report shall include the documentation required in paragraph 62-770.750(5) (d), F.A.C., to support the opinion that site cleanup objectives have been achieved. The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.
- If applicable, the Contractor shall submit to the EPD for review two copies of an **annual status report** documenting the recovery progress and summarizing all recovery activities.

**Timeline:** Regulatory review of Post Active Remediation Monitoring Plan is 60 days. Regulatory review of a Site Rehabilitation Completion Report is 60 days.

## **Alternative A: Monitored Natural Attenuation (Rule 62-770.690, F.A.C.)**

Natural attenuation refers to natural processes which may contain the spread of and reduce contamination in groundwater and soil to acceptable levels. These natural processes include diffusion, dispersion, volatilization, biodegradation, adsorption, and chemical reactions with subsurface materials. Monitoring of contamination is required on a regular schedule to ensure that the reduction of contamination is proceeding at rates consistent with defined cleanup objectives. Monitored natural attenuation may only be used at sites which meet certain requirements, including:

- The contamination will not pose an unacceptable risk to human health or the environment,
- Free product and contaminated soil have been effectively removed from the site,
- Groundwater contaminant plumes are stable or decreasing in size and are not migrating, and
- Groundwater and Soil Cleanup Target Levels are expected to be achieved in a reasonable period of time.

The objective of the monitoring program shall be to meet the applicable No Further Action criteria of Rule 62-770.680 F.A.C.

### **Work Plan:**

A minimum of two monitoring wells is required. The designated monitoring wells shall be sampled for analyses of applicable petroleum products' contaminants of concern no more frequently than quarterly. If analyses of groundwater samples indicate that concentrations of applicable petroleum products' contaminants of concern exceed any action level specified in the plan approval, the well or wells shall be re-sampled no later than 30 days after the initial positive result is known.

On an annual basis, the analytical data shall be evaluated in reference to the expected reductions in concentrations of petroleum products' contaminants of concern to verify progress of site rehabilitation by natural attenuation. If natural attenuation monitoring is the option selected after site assessment, a minimum of two sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria have been met for two consecutive sampling events. If natural attenuation monitoring follows active remediation, a minimum of four sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria have been met for at least the last two sampling events.

### **Reporting:**

- The monitoring program shall be performed as specified in the Natural Attenuation Monitoring Plan approval and shall meet the criteria listed in Rule 62-770.680 (8), F.A.C.
- Within 60 days of sample collection, the Contractor shall submit to the EPD for review two copies of a Natural Attenuation Monitoring Report including the information listed in Rule 62-770.690(8) (d), F.A.C.
- The Contractor shall submit to the EPD for review two copies of an annual status report documenting the recovery progress and summarizing all recovery activities.
- When natural attenuation monitoring is considered complete, the Contractor shall submit to the EPD for review two copies of a Site Rehabilitation Completion Report with a No Further Action Proposal.

**Timeline:** Regulatory review of Natural Attenuation Monitoring Plan is 60 days. Regulatory review of Site Rehabilitation Completion Report is 60 days. The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

## **Alternative B: No Further Action Required (Rule 62-770.680, F.A.C.)**

The final goal of assessment and remediation at a contaminated site is to achieve No Further Action (NFA) status. NFA status means that further assessment or clean up is not required, unless contaminants increase above applicable standards or a subsequent discharge occurs. No Further Action applies for sites where all of the following apply:

- Free product does not exist
- Any contaminated soil in the unsaturated zone does not exceed background concentrations, or the lower of applicable direct exposure and leachability standards (Note: If only leachability standards are exceeded, soils may be tested to determine if they actually are leaching contaminants to groundwater.)
- Contaminants in ground and surface water do not exceed background concentrations or applicable standards

If certain controls are utilized to eliminate or minimize the exposure of contaminants to receptors, a site may be granted No Further Action status even though contamination remains in soil and/or groundwater above applicable standards. There are two (2) types of controls which are used to achieve **No Further Action with Conditions** (NFAC): engineered controls (not mandatory) and institutional controls (mandatory). Institutional controls are legal documents which are linked to the property (unless the DEP approves removal of the controls), and are kept on file with the DEP and not destroyed. This documentation specifically prohibits land uses and other activities which may pose an unacceptable threat of exposure to contaminants. They are also used to ensure the integrity of engineering controls. Engineering controls such as pavement, barriers, and slurry walls are designed to limit access and exposure to contamination or are designed to eliminate further migration of the contamination. Engineering controls must always be used in conjunction with institutional controls to ensure that the engineering controls are properly monitored and maintained and that the DEP has access to inspect the controls. In most cases it is necessary for the contamination to be confined to the property that was the source of contamination to qualify for an NFA with Conditions site closure, since the source property owner cannot impose institutional controls on neighboring property owners.

### **Reporting:**

- Unless the No Further Action Proposal is included in a Site Assessment Report or a Site Rehabilitation Completion Report when the criteria for No Further Action have been met, the Contractor shall submit to the EPD for review two copies of the **No Further Action Proposal**.

**Timeline:** Regulatory review of NFA proposal is 60 days.

### **Disclaimer:**

The information and procedures listed above have been verified to the best of our ability through communication with the Broward County Environmental Protection Department and online research of the FDEP and BCEPD agency websites and the Florida Statutes, Florida Administrative Code, and the Broward County Code of Ordinances websites. However, any discrepancies to the actual process once initiated are not the responsibility of Calvin, Giordano & Associates.

# Exhibit B

## Florida Administrative Code

### Chapter 62-770

#### **CHAPTER 62-770 PETROLEUM CONTAMINATION SITE CLEANUP CRITERIA**

62-770.100 Introduction and Scope. (Repealed)  
62-770.130 Referenced Standards and Guidelines. (Repealed)  
62-770.140 Referenced Guidelines.  
62-770.160 Applicability.  
62-770.200 Acronyms and Definitions.  
62-770.220 Notices.  
62-770.250 Contamination Reporting.  
62-770.300 Interim Source Removal.  
62-770.400 Quality Assurance Requirements.  
62-770.490 Professional Certifications.  
62-770.500 Professional Certifications. (Repealed)  
62-770.600 Site Assessment.  
62-770.610 Fate and Transport Model and Statistical Method Requirements.  
62-770.630 Contamination Assessment Report (CAR). (Repealed)  
62-770.640 Risk Assessment. (Repealed)  
62-770.650 Risk Assessment.  
62-770.660 Monitoring. (Repealed)  
62-770.680 No Further Action.  
62-770.690 Natural Attenuation Monitoring.  
62-770.700 Active Remediation.  
62-770.730 Remedial Action. (Repealed)  
62-770.750 Post Active Remediation Monitoring.  
62-770.760 Site Rehabilitation Completion. (Repealed)  
62-770.800 Time Schedules.  
62-770.830 Notices. (Repealed)  
62-770.860 Permit Requirements. (Repealed)  
62-770.880 Local Programs for Control of Contamination. (Repealed)  
62-770.890 Alternative Procedures and Requirements.  
62-770.900 Forms.

#### **62-770.140 Referenced Guidelines.**

Specific references to the guidelines listed below are made within this chapter. The guidelines are not standards as defined in

Section 403.803, F.S. Use of the guidelines is not mandatory; the guidelines are included for informational purposes only.

- (1) Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C., Final Report, dated February 2005.
- (2) Approach to the Assessment of Sediment Quality in Florida Coastal Water, Volumes 1-4, dated November 1994.
- (3) American Society for Testing and Materials (ASTM) RBCA Fate and Transport Models: Compendium and Selection Guidance, dated 1999.
- (4) Chapter 62-770, F.A.C., Petroleum Risk-Based Corrective Action (RBCA) Flow Process Flow Charts, dated December 23, 2004.
- (5) Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits, dated October 12, 2004.
- (6) Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters, dated January 2003.



F.A.C., provides default groundwater, surface water, and soil CTLs, as well as natural attenuation default concentrations for groundwater, a listing of soil properties and test methods, a listing of site-specific conditions and geochemical parameters, and default parameters and equations that may be used to establish alternative groundwater and soil CTLs for identified petroleum products' contaminants of concern listed in Table A.

(7) CTLs for petroleum products' contaminants of concern found in groundwater, surface water, or soil, as specified in Chapter 62-777, F.A.C., Tables I and II, or derived pursuant to Chapter 62-777, F.A.C., or alternative CTLs that may be established pursuant to Rule 62-770.650 or 62-770.680, F.A.C., are enforceable by the Department pursuant to this chapter and apply only in the rehabilitation of sites contaminated with petroleum or petroleum products.

(8) This chapter is established for the purposes of protecting the human health, public safety, and the environment under actual circumstances of exposure and for determining, on a site-specific basis, the rehabilitation program tasks that comprise a site rehabilitation program and the levels at which a rehabilitation program task and site rehabilitation program may be deemed complete. In establishing this chapter, a risk-based corrective action process was applied to the maximum extent feasible, to achieve protection of human health, public safety, and the environment in a cost-effective manner. This chapter provides a phased risk-based corrective action process that is iterative and that tailors site rehabilitation tasks to site-specific conditions and risks. To facilitate such a phased risk-based corrective action process, the responsible party is encouraged to have discussions with the Department or the FDEP local program to establish decision points at which risk management decisions will be made. These various decision points include the scope and methodology of the site assessment, applicable exposure factors, the remedial strategy for the site, and risk management options based on the current and reasonable, ascertainable future land uses at the site.

When requested by the responsible party, the Department or the FDEP local program shall use all reasonable efforts to provide early decisions regarding these decision points based on the current and future land uses at the site, and the site information provided by the responsible party. For petroleum products' contaminants of concern found at the site about which information regarding the actual circumstances of exposure has been provided to the responsible party by the Department, a local government, or the public, the CTLs for the affected medium or media, except where a State water quality standard is applicable, shall be adjusted to take into account the site-specific exposure conditions including multiple pathways of exposure that affect the same individual or sub-population, and site-specific CTLs shall be calculated taking into account, through apportionment, potential additive toxic effects of contaminants. Therefore, this chapter provides both default CTLs and a process for the derivation of site-specific alternative CTLs that are protective of human health, public safety, and the environment.

(9) For sites where a Site Rehabilitation Completion Order was issued for every known discharge prior to April 17, 2005, the CTLs for petroleum products' contaminants of concern shall be those that were in effect at the time of issuance of the Order(s). If a subsequent discharge of petroleum or petroleum products occurs at the site after issuance of the Order(s), site rehabilitation may be required pursuant to applicable provisions of this chapter, to reduce concentrations of petroleum products' contaminants of concern resulting from the subsequent discharge, to the CTLs specified in Chapter 62-770, F.A.C., subject to the provisions of subsection

62-770.160(4), F.A.C.

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(10) Receipt of approval of any task or report pursuant to this chapter does not relieve the responsible party from the obligation

to comply with other Department rules (for example, Chapters 62-701, 62-713, 62-730, 62-780, 62-782, and 62-785, F.A.C.)

regarding off-site disposal, relocation, or treatment of contaminated media. Responsible parties are advised that other federal or

local laws and regulations may apply to these activities.

*Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071 FS. History—New 11-1-87, Formerly 17-70 004, Amended 2-21-90,*

*Formerly 17-770 160, Amended 7-30-96, 9-23-97, 8-5-99, 4-17-05*

#### **62-770.200 Acronyms and Definitions.**

All words and phrases defined in Section 376.301, F.S., shall have the same meaning when used in this chapter unless specifically

stated otherwise in this chapter. The following words and phrases used in this chapter shall, unless the context clearly indicates

otherwise, have the following meanings:

(1) “Action level” means a specified concentration of a petroleum products’ contaminant of concern that, if exceeded during natural attenuation monitoring or post active remediation monitoring, may require additional site assessment or active remediation.

Action levels are established during the approval process for Natural Attenuation Monitoring Plans pursuant to Rule 62-770.690,

F.A.C., and Post Active Remediation Monitoring Plans pursuant to Rule 62-770.750, F.A.C., and are not equivalent to CTLs.

(2) “Additive effect” means a scientific principle that the toxicity that occurs as a result of exposure is the sum of the toxicities

of the individual chemicals to which an individual is exposed.

(3) “Antagonistic effect” means a scientific principle that the toxicity that occurs as a result of exposure is less than the sum of

the toxicities of the individual chemicals to which an individual is exposed.

(4) “Apportioned” means the adjustment of CTLs such that for non-carcinogenic petroleum products’ contaminants of concern

that affect the same target organ(s), the hazard index (sum of the hazard quotients) is 1 or less, and for carcinogens, the cumulative

lifetime excess cancer risk level is 1.0E-6, as applicable.

(5) “Background concentrations” means concentrations of petroleum products’ contaminants of concern that are naturally

occurring in the groundwater, surface water, soil, or sediment in the vicinity of the site.

(6) “Best achievable detection limit” means the practical quantitation limit. [Refer to the PQL guidelines referenced in

subsection 62-770.140(5), F.A.C., for guidance.]

(7) “Cleanup target level” (CTL) means the concentration for each petroleum products’ contaminant of concern identified by

an applicable analytical test method, in the medium of concern, at which a site rehabilitation program is deemed complete.

(8) “Contaminant” means any physical, chemical, biological, or radiological substance present in any medium that may result

in adverse effects to human health or the environment, or that creates an adverse nuisance, organoleptic, or aesthetic condition in

groundwater.

(9) “Contaminated” or “contamination” means the presence of petroleum or petroleum products or their chemical constituents

in surface water, groundwater, soil, sediment, or upon the land, in concentrations that exceed the applicable CTLs specified in

Chapter 62-777, F.A.C., or water quality standards in Chapter 62-302 or 62-520, F.A.C., or in concentrations that may result in

contaminated sediment. This definition is solely for use within Chapter 62-770, F.A.C.

(10) “Contaminated sediment” means sediment that is contaminated with petroleum or petroleum products or their chemical

constituents as determined by the concentrations of the petroleum or petroleum products' contaminants of concern, actual circumstances of exposure, biological diversity studies, toxicity testing, or other evidence of harmful effects, as applicable. [Refer to the sediment guidelines referenced in subsection 62-770.140(2), F.A.C. for guidance on the evaluation of concentrations of petroleum products' contaminants of concern, sediment quality conditions, and testing methods.]

(11) "Contamination" refer to the definition for "contaminated."

(12) "CTL" means cleanup target level.

(13) "Department" means the Florida Department of Environmental Protection.

(14) "Discharge" includes, but is not limited to, any spilling, leaking, seeping, misapplying, pouring, emitting, emptying, releasing, or dumping of any petroleum or petroleum products, that occurs and that affects lands and the surface waters and ground waters of the State not regulated by Sections 376.011-.21, F.S.

(15) "Discharger" means the person who has dominion or control over the petroleum or petroleum products at the time of the discharge into the environment.

(16) "Discovery" means:

(a) Observance or detection of free product in borcholes, wells, open drainage ditches, open excavations or trenches, or on nearby surface water, or petroleum or petroleum products in excess of 0.01 foot in thickness in sewer lines, subsurface utility conduits or vaults, unless the product has been removed and it was confirmed that a release into the environment did not occur;

(b) Observance of visually stained soil or odor of petroleum products resulting from a discharge of used oil equal to, or exceeding, 25 gallons on a pervious surface [see paragraph 62-770.160(1)(c), F.A.C., for cleanup requirements applicable to discharges of less than 25 gallons];

(c) Discharges of petroleum or petroleum products equal to, or exceeding, 25 gallons on a pervious surface [see paragraph 62-770.160(1)(c), F.A.C., for cleanup requirements applicable to discharges of less than 25 gallons];

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(d) Results of analytical test on a groundwater sample that exceed the CTLs referenced in Chapter 62-777, F.A.C., Table I, groundwater criteria column for the petroleum products' contaminants of concern listed in Table A of this chapter; or

(e) Results of analytical test on a soil sample that exceed the lower of the direct exposure residential CTLs and leachability based on groundwater criteria CTLs specified in Chapter 62-777, F.A.C., Table II for the petroleum products' contaminants of concern listed in Table A of this chapter.

(17) "Domestic purposes" means that the water is used for human consumption such as bathing, cooking, or drinking, and is provided through pipes or other constructed conveyances.

(18) "Engineering control" means use of existing features (such as buildings) or modifications to a site to reduce or eliminate the potential for migration of, or exposure to, petroleum products' contaminants of concern. Examples of modifications include physical or hydraulic control measures, capping, point-of-use treatments, or slurry walls.

(19) "Excessively contaminated soil" for the purposes of Section 376.3071(11)(b)2., F.S., that only applies to sites scored 10 or

less (unless laboratory results verify that the organic vapor analysis data are not relevant), means soil saturated with petroleum or petroleum products or soil that causes a total corrected hydrocarbon measurement of 500 parts per million (ppm) or higher for

Gasoline Analytical Group or 50 ppm or higher for Kerosene Analytical Group. Readings shall be obtained at the site on an organic

vapor analysis instrument with a flame ionization detector in the survey mode upon sampling the headspace in half-filled, 8-ounce

or 16-ounce jars. Each soil sample shall be split into two jars, the two sub-samples shall be brought to a temperature of between 20° C. (68° F.) and 32° C. (90° F.), and the readings shall be obtained 5 to 30 minutes thereafter. One of the readings shall be obtained with the use of an activated charcoal filter unless the unfiltered reading is non-detect. The total corrected hydrocarbon measurement shall be determined by subtracting the filtered reading from the unfiltered reading. Instruments with a photo ionization detector may be used, but shall not be used in situations where humidity will interfere with the instruments' sensitivity (including periods of rain, measuring wet or moist soil). If an instrument with a photo ionization detector is used, a filtered reading is not warranted and therefore sample splitting is not necessary. Analytical instruments shall be calibrated in accordance with the manufacturer's instructions.

(20) "Exposure unit" means an area over which receptors are expected to have equal and random exposure.

(21) "FDEP" means the Florida Department of Environmental Protection.

(22) "FDEP local program" means a county or Department of Health local program established pursuant to a contract pursuant to Section 376.3073, F.S., to assist the Department in the administration of the petroleum contamination site cleanup.

(23) "Free product" means petroleum or petroleum product in excess of 0.01 foot in thickness, measured at its thickest point, floating on surface water or groundwater.

(24) "Gasoline Analytical Group" means aviation gasoline, gasohol, and motor gasoline or equivalent petroleum products.

(25) "Groundwater" means water beneath the surface of the ground within a zone of saturation, whether or not flowing through known or definite channels.

(26) "Innovative technology" means a process that has been tested and used as a treatment for contamination, but lacks an established history of full-scale use and information about its cost and how well it works sufficient to support prediction of its performance under a variety of operating conditions. An innovative technology is one that is undergoing pilot-scale treatability studies, that usually are performed in the field or the laboratory and require installation of the technology, and that provide performance, cost, and design objectives for the technology prior to full-scale use.

(27) "Institutional control" means a restriction on use of, or access to, a site to eliminate or minimize exposure to petroleum products' contaminants of concern. Examples of institutional controls include deed restrictions, restrictive covenants, and conservation easements.

(28) "Interim source removal" means the removal of free product, contaminated groundwater, or contaminated soil, or the removal of contaminants from soil that has been contaminated to the extent that leaching to groundwater has occurred or is occurring, prior to approval of a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C.

(29) "Kerosene Analytical Group" means diesel, Jet-A, Jet-B, JP-4, JP-5, and kerosene or equivalent petroleum products.

(30) "Low yield" means groundwater that is contained in an aquifer that has an average hydraulic conductivity of less than one foot per day, determined by performing slug tests or an equivalent method for determining hydraulic conductivity on a minimum of three monitoring wells in each affected monitoring zone; and a maximum yield of 80 gallons per day, determined by pumping a four inch well screened across the cross-section of the plume, for a minimum of two hours.

(31) "Monitoring well" means a well constructed with a surface seal and a sand filter pack in accordance with accepted design practices in order to provide for the collection of representative groundwater samples for laboratory analyses. Such wells may also

be used to detect the presence of free product or collect water-level elevation data to aid in determining the direction of groundwater flow.

(32) "MTBE" means Methyl tert-butyl ether.

(33) "Natural attenuation" means a verifiable approach to site rehabilitation that allows natural processes to contain the spread of contamination and reduce the concentrations of petroleum products' contaminants of concern in contaminated groundwater and soil. Natural attenuation processes may include sorption, biodegradation, chemical reactions with subsurface materials, diffusion, dispersion, and volatilization.

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(34) "Newspaper of general circulation" means a newspaper published at least on a weekly basis and printed in the language

most commonly spoken in the area within which it circulates, but does not include a newspaper intended primarily for members of

a particular professional or occupational group, a newspaper whose primary function is to carry legal notices, or a newspaper that is

given away primarily to distribute advertising.

(35) "Organoleptic" means pertaining to, or perceived by, a sensory organ (i.e., color, taste, or odor).

(36) "PAHs" means Polycyclic Aromatic Hydrocarbons.

(37) "PCBs" means Polychlorinated Biphenyls.

(38) "Person responsible for site rehabilitation" (PRSR) means the real property owner, the facility owner, the facility operator, the discharger, or other person or entity responsible for site rehabilitation, or the Department when the Department is conducting

the site rehabilitation at facilities with discharges eligible for State-funded cleanup pursuant to Sections 376.305(6), 376.3071(9),

376.3071(13), and 376.3072, F.S.

(39) "Petroleum contamination site" means any contiguous land, sediment, surface water, or groundwater area upon or into

which a discharge of petroleum or petroleum products has occurred or for which evidence exists that such a discharge has occurred.

(40) "Petroleum products' contaminants of concern" means the contaminants listed in Table A of this chapter and similar

chemicals found in additives, provided the contaminants are present as a result of a discharge of petroleum or petroleum products.

(41) "Piezometer" means a permanent or temporary well that may be designed and constructed without the surface sealing or

sand filter pack requirements of a monitoring well. This type of well is primarily used to detect the presence of free product or

collect water-level elevation data to aid in determining the direction of groundwater flow.

(42) "Plume" means the portion of an aquifer or aquifers in which groundwater contamination by petroleum products' contaminants of concern above applicable CTLs, and background concentrations as defined in subsection 62-

770.200(5), F.A.C.,

has been detected.

(43) "Poor quality" means groundwater within the affected monitoring zone with background concentrations, as defined in

subsection 62-770.200(5), F.A.C., that exceed any of Florida's Primary or Secondary Drinking Water Standards referenced in

Chapter 62-550, F.A.C.

(44) "Practical quantitation limit" (PQL) means the lowest level that can be reliably measured during routine laboratory

operating conditions within specified limits of precision and accuracy. [Refer to the PQL guidelines referenced in subsection

62-770.140(5), F.A.C., for guidance.]

(45) "Priority pollutant" means any compound listed in 40 CFR Part 122, Appendix D, Tables II through IV.

(46) "Product recovery" means the removal of free product.

(47) "PRSR" means person responsible for site rehabilitation.

- (48) "Real property owner" means the person or entity that is vested with ownership, dominion, or legal or rightful title to the real property.
- (49) "Reportable quantity" means a discharge of petroleum or petroleum products equal to, or exceeding, 25 gallons on a pervious surface.
- (50) "Responsible party" means the real property owner, the facility owner, the facility operator, or the discharger, or other person or entity responsible for site rehabilitation unless that entity is the Department.
- (51) "Sediment" means the unconsolidated solid matrix occurring immediately beneath any surface water body. The surface water body may be present part or all of the time and may support a wetland environment or vegetation.
- (52) "Site" refer to the definition for "petroleum contamination site."
- (53) "Site assessment" means the performance of any of the tasks or activities as described in Rules 62-770.300 and 62-770.600, F.A.C.
- (54) "Site rehabilitation" means the assessment of site contamination and the remediation activities that reduce the levels of contaminants of concern at a site through accepted treatment methods to meet the CTLs established for that site.
- (55) "Soil saturated with petroleum or petroleum products" means soil observed to contain petroleum or petroleum products that drain from the soil when it is handled or squeezed, or create streaks of petroleum or petroleum products on excavation tools or on plastic sheeting upon exposure to the soil.
- (56) "Source removal" means the removal of free product, contaminated groundwater, or contaminated soil, or the removal of contaminants from soil that has been contaminated to the extent that leaching to groundwater has occurred or is occurring, after approval of a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C.
- (57) "Surface water" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.
- (58) "Synergistic effect" means a scientific principle that the toxicity that occurs as a result of exposure is more than the sum of the toxicities of the individual chemicals to which an individual is exposed.
- (59) "Temporary point of compliance" (TPOC) is the boundary represented by one or more designated monitoring wells at which groundwater CTLs may not be exceeded while site rehabilitation is proceeding.
- (60) "Total Volatile Organic Aromatics" means the sum of concentrations of Benzene, Toluene, total Xylenes, and Ethylbenzene.
- (61) "TPOC" means temporary point of compliance.
- (62) "TRPHs" means Total Recoverable Petroleum Hydrocarbons.
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- (63) "UCL" means upper confidence limit estimate of the arithmetic mean.
- (64) "Used oil" means any lubricants for use in internal combustion engines that have been refined from crude oil and, as a result of use, storage, or handling, have become unsuitable for their original purpose due to the presence of impurities or loss of properties, but that may be suitable for further use as a fuel or are economically recyclable for use as a fuel. "Used oil" shall not include any used oil that has been mixed with any material that is a hazardous waste, unless the material is a hazardous waste solely due to the characteristic of ignitability as defined in 40 CFR Part 261, Subpart C.
- (65) "VOHs" means Volatile Organic Halocarbons.
- (66) "Waters" or "waters of the State" means waters as defined in Section 403.031, F.S.
- Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071 FS. History—New 11-1-87, Formerly 17-70.003, Amended 2-21-90, Formerly 17-770.200, Amended 9-23-97, 8-5-99, 4-17-05.*
- 62-770.220 Notices.**
- (1) Notice of Field Activities – When requested in writing by the Department or by the FDEP local program, the responsible

party, its agent, or authorized representative shall provide written notice to the Department or to the FDEP local program at least three days prior to performing field activities such as interim source removal activities, installing monitoring or recovery well(s), performing sampling, installing remediation equipment, or installing an engineering control. Personnel from the Department or from the FDEP local program shall be allowed the opportunity to observe these field activities and to take split samples. If the Department or the FDEP local program chooses to be present when the field activities are being performed, the Department or the FDEP local program shall be responsible for confirming that the field activities are being performed in accordance with the schedule provided in the written notification.

(2) Initial Notice of Contamination Beyond Property Boundaries – At any time during site rehabilitation conducted pursuant to this chapter, if the PRSR, its authorized agent, or other representative discovers from laboratory analytical results that comply with appropriate quality assurance protocols pursuant to Chapter 62-160, F.A.C., that contamination [as defined in subsection 62-770.200(9), F.A.C.] exists in any medium beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter, the PRSR shall give actual notice as soon as possible, but no later than 10 days from such discovery, to the Division of Waste Management at the Department's Tallahassee Office. The actual notice shall be provided on Form 62-770.900(3) titled "Initial Notice of Contamination Beyond Property Boundaries" and mailed by "Certified Mail, Return Receipt Requested." A

copy of such notice shall be mailed to the appropriate Department District Office and to the County Health Department. The notice shall include the following information:

(a) The location of the property at which site rehabilitation was initiated pursuant to this chapter and contact information for the responsible party, its authorized agent, or other representative;

(b) A listing of all record owners of any real property, other than the property at which site rehabilitation was initiated pursuant

to this chapter, at which contamination has been discovered; the parcel identification number for any such real property; the

owner's address listed in the current county property tax office records; and the owner's telephone number;

(c) Separate table(s) by medium (groundwater, soil, surface water, or sediment) that list sampling locations; sampling date(s);

names of contaminants detected above CTLs; their corresponding CTLs; the contaminant concentration(s); and whether the CTL is

based on health or nuisance, organoleptic, or aesthetic concerns; and

(d) A vicinity map that shows the sampling locations with corresponding laboratory analytical results and the date(s) on which

the sample(s) was(were) collected, and identifies the property boundaries of the property at which site rehabilitation was initiated

pursuant to this chapter and the other property(ies) at which contamination has been discovered during such site rehabilitation.

(3) Subsequent Notice of Contamination Beyond Source Property Boundaries for Establishment of a Temporary Point of

Compliance (TPOC) – Prior to the Department authorizing a temporary extension of the point of compliance beyond the boundary

of the source property (i.e., the location from which the contamination originates) in conjunction with Natural Attenuation

Monitoring pursuant to Rule 62-770.690, F.A.C., or Active Remediation pursuant to Rule 62-770.700, F.A.C., the PRSR shall

provide the following:

(a) Actual notice in written form mailed by "Certified Mail, Return Receipt Requested" to the appropriate County Health

Department and all record owners of any real property into which the point of compliance is allowed to extend (mailed to the owner's address listed in the current county property tax office records). The notice shall include the following information:

1. The type of proposed agency action (i.e., temporary extension of the point of compliance);
2. A description of the location of the subject site and the name and address of the responsible party;
3. The location where complete copies of any relevant documents concerning the site and the proposed remedial strategy, including temporary extension of the point of compliance, are available for public inspection;
4. The name and address of a contact person at the Department or at the FDEP local program who is the project manager for the site rehabilitation, to whom comments should be directed, and from whom copies of the Department's actions regarding the site may be requested; and
5. A paragraph including the statement: "Persons receiving this notice shall have the opportunity to comment on the Department's proposed action within 30 days of receipt of the notice." For purposes of actual notice, the 30-day comment period shall commence on the delivery date stamped on the return receipt; and

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(b) Copies of notice must be provided to the Department as proof of compliance with this section.

(4) Status Update 5-Year Notice -- When utilizing a TPOC beyond the boundary of the source property to facilitate natural

attenuation monitoring or active remediation, an additional notice concerning the status of the site rehabilitation shall be similarly

provided every five years to the classes of persons who received notice pursuant to subsection 62-770.220(3), F.A.C., unless in the

intervening time, such persons have been informed that the contamination no longer affects the property into which the point of

compliance was allowed to extend.

(5) When the PRSR is the Department, if the Department ceases to conduct the site rehabilitation (for example, a funding a cap

is reached), then the noticing requirements shall be assumed by the responsible party.

*Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071 FS. History New 4-17-05, Amended 8-4-05*

#### **62-770.250 Contamination Reporting.**

Upon discovery of contamination (unless the contamination is the result of a previously reported discharge for which site

rehabilitation completion has not been achieved or the contamination is known to be from a non-petroleum product source) or upon

a discharge of petroleum or petroleum products, notification shall be submitted using the Discharge Report Form [Form Number

62-761.900(1)].

(1) If the discharge was from a storage tank system regulated pursuant to Chapter 62-761 or 62-762, F.A.C., the discharge shall

be reported by the facility owner or operator pursuant to the applicable requirements of Chapters 62-761 and 62-762, F.A.C.; or

(2) For all other discharges of petroleum or petroleum products, the discharge shall be reported within one week of discovery.

However, discharges of reportable quantities onto the surface of lands or to surface waters shall be reported to the State Warning

Point or Department of Environmental Protection, Bureau of Emergency Response as soon as possible but no later than 24 hours

after occurrence. The discharge shall be reported by:

(a) The discharger; or

(b) The owner or operator if the discharger is unknown or if the discovery was the result of a previously unreported discharge.

*Specific Authority 376.303, 376.3071 FS. Law Implemented 376.305, 376.3071 FS. History New 2-21-90, Formerly 17-770.250, Amended*

*9-23-97, 8-5-99, 4-17-05.*

#### **62-770.300 Interim Source Removal.**

(1) Free Product Removal and Disposal.

(a) Except for those sites described in paragraph (1)(g) of this rule, within three days of discovery of free product the



responsible party shall take steps to obtain cleanup services for product recovery or initiate product recovery.

Product recovery

shall be performed pursuant to paragraph 62-770.300(1)(b), F.A.C. The responsible party is required to complete product recovery provided that:

1. The product recovery method shall be selected pursuant to paragraph 62-770.300(1)(b), F.A.C.;
2. The product recovery shall not spread contamination into previously uncontaminated or less contaminated areas through untreated discharges, improper treatment, improper disposal, or improper storage;
3. Flammable products shall be handled in a safe manner; and
4. All sampling and analyses shall be performed pursuant to Rule 62-770.400, F.A.C.

(b) The following passive and active methods of product recovery may be implemented without requesting approval from the

Department or FDEP local program:

1. Absorbent pads;
2. Skimmer pumps that include pumps with mechanical, electrical, or hand-bailed purging operations;
3. Hand or mechanical bailing; and
4. Fluid vacuum techniques (for example, vacuum pump trucks) or total fluid displacement pumps, as long as:
  - a. The technique used shall not smear or spread free product or contaminate previously uncontaminated or less contaminated media; and

b. The volume of groundwater recovered shall not be greater than two times the volume of free product recovered, except that

the first 1,000 gallons of the total fluid recovered per discharge are exempt from meeting the required ratio of groundwater to free product.

(c) In addition to the product recovery methods specified in paragraph 62-770.300(1)(b), F.A.C., the responsible party may

evaluate, propose, and submit other product recovery methods to the Department or to the FDEP local program for approval

pursuant to Rule 62-770.890, F.A.C., prior to implementation. During the submittal and approval process, implementation of one or

more of the collection methods specified in paragraph 62-770.300(1)(b), F.A.C., is required. The submittal shall include the results

of the evaluation performed to determine the potential for product spreading or smearing, and the potential for air emissions, and a

justification as to the environmental and economical benefits of the selected recovery method. The product recovery methods

proposed may include:

1. Excavation of soil saturated with petroleum or petroleum products into, or below, the water table;
2. Dewatering or groundwater extractions that may influence the depth to the water table; or
3. Air/fluid extraction.

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(d) Product recovery as an Interim Source Removal shall be deemed complete when free product has been removed to the

maximum extent practicable pursuant to paragraphs 62-770.300(1)(a) and 62-770.300(1)(b), F.A.C.

(e) Within 10 days after initiation of product recovery, the responsible party shall provide written notification to the Department or to the FDEP local program on Form 62-770.900(1).

(f) Unless a different reporting period is approved pursuant to the provisions of subsection 62-770.800(4), F.A.C., the

responsible party shall submit to the Department or to the FDEP local program for review two copies of an annual status report

documenting the recovery progress and summarizing all recovery activities.

(g) At petroleum contamination sites eligible for State funding assistance under the Inland Protection Trust Fund where the

discharge occurred prior to March 29, 1995, product recovery shall commence in accordance with the ranking established pursuant

to Chapter 62-771, F.A.C., and shall be performed pursuant to paragraphs 62-770.300(1)(b) and 62-770.300(1)(c), F.A.C., and

pursuant to Section 376.30711, F.S.

(2) Short-term Groundwater Recovery. A short-term groundwater recovery event may be performed as an interim source removal activity. Groundwater recovery from well(s) within the plume with screened intervals that intercept the water table, with the intent of achieving cleanup progress, may be performed prior to Department or FDEP local program approval of a Remedial

Action Plan submitted pursuant to Rule 62-770.700, F.A.C., provided the following criteria are met:

(a) The groundwater contamination shall be established to be less than 1/4 acre and confined to shallow aquifer well(s) with screened intervals that intercept the water table, such that the pumping of a shallow aquifer well(s) within the plume may result in the site meeting the No Further Action criteria of Rule 62-770.680, F.A.C., or the Natural Attenuation Monitoring criteria of Rule 62-770.690, F.A.C.;

(b) Free product shall not be present;

(c) The duration of the groundwater recovery shall not exceed 30 days;

(d) The recovered groundwater shall not be treated on-site and shall be properly disposed at a permitted industrial water

treatment facility, or at a publicly-owned treatment works with the approval of the sanitary sewer authority; and

(e) Sampling of representative monitoring wells to determine the effectiveness of the Short-term Groundwater Recovery event

shall be performed at least 30 days after completion of the groundwater recovery.

(3) Soil Removal, Treatment, and Disposal.

(a) If contaminated soil exists at a site, excavation of contaminated soil for proper treatment or proper disposal may be

performed. Consistent with the goals set forth in Section 403.061(33), F.S., the Department encourages treatment over disposal

options to address contaminated soil. The treatment or disposal of contaminated soil may be performed prior to Department or

FDEP local program approval of a Remedial Action Plan submitted pursuant to Rule 62-770.700, F.A.C., provided the following

criteria are met:

1. Contamination shall not be spread into previously uncontaminated or less contaminated areas through untreated discharges,

improper treatment, improper disposal, or improper storage;

2. Flammable products shall be handled in a safe manner;

3. When a soil vacuum extraction system is necessary to abate an imminent threat to human life, health, safety, or welfare

within a structure or utility conduit, then the vacuum extraction system shall be designed and operated only to abate the imminent

threat. The Department or the FDEP local program shall be notified, within 24 hours, of the imminent threat and the intent to use a

soil vacuum extraction system. The air emissions monitoring and frequency of monitoring shall be performed pursuant to

paragraphs 62-770.700(5)(a) and 62-770.700(11)(i), F.A.C.;

4. If one of the objectives of the interim source removal is to excavate all the contaminated soil, confirmatory soil samples shall

be collected at the bottom of the excavation (unless the bottom is below the water table) and walls or perimeter of the excavation;

5. When excavated soil is temporarily stored or stockpiled on-site, the soil shall be placed on an impermeable surface to

prevent leachate infiltration and secured in a manner that prevents human exposure to contaminated soil and prevents soil exposure

to precipitation that may cause surface runoff, and any excavation shall be secured to prevent entry by the public. Excavated

contaminated soil (including excessively contaminated soil) may be returned to the original excavation when petroleum storage

tank systems have been removed or replaced, or if contaminated soil was encountered during construction activities, to be

addressed pursuant to Rule 62-770.700, F.A.C.; and

6. Excavated contaminated soil (including excessively contaminated soil) shall not be stored or stockpiled on-site for more than 60 days, unless it is stockpiled on a right-of-way, in which case it shall be removed for proper treatment or proper disposal as

soon as practical but no later than 30 days after excavation, or unless it is being land farmed pursuant to paragraph 62-770.300(3)(b), F.A.C., at which time the soil shall be returned to the original excavation, or removed and properly treated or

properly disposed. Contaminated soil (including excessively contaminated soil) may be containerized in water tight drums and

stored on-site for 90 days, after which time proper treatment or proper disposal of the contaminated soil shall occur, or it may be

land farmed pursuant to paragraph 62-770.300(3)(b), F.A.C.

(b) Land farming of contaminated soil is allowed, provided the land farming operation is located on the same property as the

source of contaminated soil unless it is land farmed at a permitted stationary facility. The following criteria shall be met for

contaminated soil land farmed on the source property:

1. The land farm operation shall be at least 200 feet from any residence, school, or park;

2. An area large enough to spread the soil to a thickness of 6 to 12 inches shall be available;

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3. The land farming area shall be secured in a manner that prevents entry by the public and prevents human exposure to

contaminated soil;

4. The materials used to construct the land farm treatment area shall withstand the rigors of the land farming and weather;

5. The land farmed soil shall be placed over an impermeable liner or surface, and surrounded at all times by an impermeable

liner supported by berms;

6. The land farmed soil shall be tilled at least biweekly;

7. The land farmed soil shall be covered when not being tilled to prevent water from entering or leaving the area;

8. A monitoring and sampling program shall be established to evaluate the effectiveness of the land farming operation and the

effect on the environment, including monitoring of groundwater to confirm leaching is not occurring and of off gas emissions for

air regulatory compliance. Before the land farming operation commences, the responsible party shall submit to the Department or

to the FDEP local program the monitoring and sampling program, design specifications of the treatment area, and types and

amounts of any proposed additives to the soil, to demonstrate that the objectives of this subparagraph will be met.

Prior approval is

not required for quantities less than 20 cubic yards, but the design specifications and results of the monitoring and sampling

program shall be submitted in the Interim Source Removal Report;

9. Land farming of soil is limited to 180 days, at the end of which time proper disposal is required except if written approval

pursuant to the provisions of subsection 62-770.800(4), F.A.C., to exceed this time frame, is obtained from the Department or from

the FDEP local program; and

10. Land farmed soil that does not exceed the lower of the direct exposure residential CTLs and leachability based on

groundwater criteria CTLs specified in Chapter 62-777, F.A.C., Table II may be disposed on-site or off-site.

Responsible parties are

advised that other federal or local laws and regulations may apply to these activities. Land farmed soil that exceeds the applicable

CTLs specified in Chapter 62-777, F.A.C., Table II shall not be disposed or returned to the original excavation without obtaining

approval from the Department or from the FDEP local program, pursuant to the provisions of Rule 62-770.890, F.A.C.

(c) Soil treatment, storage, or disposal techniques not authorized by applicable rules of the Department, or in paragraph

62-770.300(3)(b), F.A.C., require approval in a Remedial Action Plan submitted pursuant to Rule 62-770.700, F.A.C.

(d) At petroleum contamination sites eligible for State funding assistance under the Inland Protection Trust Fund, soil removal for treatment or disposal, if warranted and cost-effective, shall commence in accordance with the ranking established pursuant to Chapter 62-771, F.A.C., and shall be performed in accordance with the Department's preapproval program procedures pursuant to a preapproval agreement.

(4) Authorizations. Authorization or receipt of approval pursuant to Rule 62-770.300, F.A.C., does not relieve the responsible party from the obligation to comply with other Department rules (for example, Chapters 62-701 and 62-730, F.A.C.) for product recovery, product disposal, groundwater recovery, or the handling, storage, disposal, or treatment of contaminated media.

Responsible parties are advised that other federal or local laws and regulations may apply to these activities.

(5) Interim Source Removal Report.

(a) Within 60 days of completion of interim source removal activities, the responsible party shall submit to the Department or to the FDEP local program for review two copies of an Interim Source Removal Report. If analytical results obtained pursuant to paragraph 62-770.300(2)(e), F.A.C., and subparagraphs 62-770.300(3)(a)4. and 62-770.600(4)(m)3., F.A.C., as applicable, after completion of the interim source removal, demonstrate that the applicable No Further Action criteria of subsection 62-770.680(1), F.A.C., are met, a Site Assessment Report pursuant to subsection 62-770.600(7), F.A.C., may be submitted in lieu of the Interim Source Removal Report.

(b) Unless otherwise specified in a preapproval agreement, the Interim Source Removal Report shall contain the following information in detail, as applicable:

1. The volume of product that was discharged, if known;
2. The volume of free product and the volume of groundwater recovered;
3. The volume of contaminated soil excavated and treated or properly disposed;
4. The disposal or recycling methods for free product and contaminated soil;
5. The disposal methods for other contaminated media and any investigation-derived waste;
6. A scaled site map (including a graphical representation of the scale used) that shows the location(s) where free product and groundwater were recovered, the area of soil removed, and the approximate locations where all samples were collected;
7. A table that summarizes free product thickness in each monitoring well or piezometer, the total depth and screened interval of each monitoring well or piezometer, and the dates the measurements were made;
8. The type of field screening instrument, analytical methods, or other methods used;
9. The dimensions of the excavation(s) and location(s), integrity, capacities, and last known contents of storage tanks, integral piping, dispensers, or appurtenances removed;
10. The dimensions of the excavation(s) and location(s) and capacities of replacement underground storage tanks;
11. A table that indicates the identification, depth, and field soil screening results of each sample collected;
12. Separate tables by medium that summarize all available soil and groundwater analytical results, detection limits achieved for non-detected analytes, and analyses performed (listing all contaminants analyzed and their corresponding CTLs);
13. Depth to groundwater at the time of each excavation, measurement locations, and method used to obtain that information;
14. Type of petroleum or petroleum products discharged and a determination, if possible, of how the product was released;
15. A scaled site map (including a graphical representation of the scale used) that shows the locations and results of confirmatory soil samples, in relation to the area of soil removal;
16. Documentation or certification that confirms the proper treatment or proper disposal of the free product, contaminated

groundwater, or contaminated soil, including disposal manifests for free product, a copy of the documentation or certification of

treatment or acceptance of the contaminated soil, and results of analyses, if performed; and

17. For land farmed soil, a copy of the pre-treatment and post-treatment analytical results.

(c) Within 60 days of receipt of an Interim Source Removal Report, the Department or the FDEP local program shall:

1. Provide the responsible party with written approval of the Interim Source Removal Report submitted pursuant to the criteria

of paragraph 62-770.300(5)(b), F.A.C.; or

2. Notify the responsible party in writing, stating the reason(s) why the Interim Source Removal Report does not conform with

the applicable Interim Source Removal criteria of paragraph 62-770.300(5)(b), F.A.C.

(6) If the Interim Source Removal Report is incomplete in any respect, or is insufficient to satisfy the criteria of paragraph

62-770.300(5)(b), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to subparagraph

62-770.300(5)(c)2., F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two

copies of an Interim Source Removal Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

(7) If the interim source removal is performed after submittal of the Site Assessment Report, the responsible party shall submit

to the Department or to the FDEP local program for review two copies of a Site Assessment Report Addendum that updates the Site

Assessment Report by summarizing the interim source removal activities and all sampling results obtained after submittal of the

Site Assessment Report, and that includes a recommendation pursuant to paragraph 62-770.600(8)(b), F.A.C.

*Specific Authority 376 303, 376 3071 FS. Law Implemented 376 3071, 376 30711 FS. History—New 11-1-87, Formerly 17-70.006, Amended*

*2-21-90, Formerly 17-770.300, Amended 9-3-96, 9-23-97, 8-5-99, 4-17-05.*

#### **62-770.400 Quality Assurance Requirements.**

(1) Persons performing sampling and analyses pursuant to this chapter shall comply with the applicable requirements of

Chapter 62-160, F.A.C., Quality Assurance.

(2) Unless otherwise specified in this chapter, reports that are submitted to the Department or to the FDEP local program and

that contain analytical data shall include the following forms and information, as applicable:

(a) Laboratory reports that include all information specified in subsection 62-160.340(2), F.A.C., and are in the format

specified in Chapter 62-160, F.A.C. (soil analytical results shall be reported on a dry-weight basis);

(b) Copies of the completed chain of custody record form(s) [Form 62-770.900(2) or an equivalent chain of custody form that

includes all the items required by Form 62-770.900(2)];

(c) Copies of the completed water sampling log form(s) pursuant to Chapter 62-160, F.A.C.; and

(d) Results from screening tests or on-site analyses performed pursuant to this chapter.

*Specific Authority 376 303, 376 3071, 403 0877 FS. Law Implemented 376 3071 FS. History—New 11-1-87, Formerly 17-70.007, Amended*

*2-21-90, Formerly 17-770.400, Amended 9-23-97, 8-5-99, 4-17-05*

#### **62-770.490 Professional Certifications.**

Applicable portions of technical documents submitted by the responsible party to the Department or to the FDEP local program

shall be signed and sealed by a Professional Engineer registered pursuant to Chapter 471, F.S., or a Professional Geologist

registered pursuant to Chapter 492, F.S., certifying that the applicable portions of the technical document and associated work

comply with standard professional practices, this chapter and other rules of the Department, and any other applicable laws and rules

governing the profession. If a laboratory report is submitted separately from any other technical document submittal, this

requirement shall not apply to the laboratory report.

*Specific Authority 403 0877 FS. Law Implemented 376 3071, 403 0877 FS. History—New 8-5-99, Amended 4-17-05*

#### 62-770.600 Site Assessment.

(1) Within 30 days of discovery of contamination, the responsible party shall initiate a site assessment.

(2) To facilitate the site assessment process, the responsible party may have discussions with the Department or the FDEP local

program at various decision points to establish the scope and methodology of the site assessment, applicable exposure factors and the remedial strategy for the site, and risk management options based on the current and projected land use(s) at the site.

(3) The objectives of the site assessment shall be the following, as applicable:

(a) To determine or confirm the source(s) of contamination to the extent practicable and to estimate the volume of petroleum or petroleum products that was released. That confirmation shall include a determination of the structural integrity, in accordance with

the testing procedures specified in Chapter 62-761, F.A.C., of any petroleum storage tank system that exists at the property and is

likely to be the source of the contamination;

(b) To evaluate the current exposure and potential risk of exposure to humans and the environment, including multiple

pathways of exposure. The physical, chemical, and biological characteristics of each petroleum products' contaminant of concern

and the individual site characteristics shall be considered. The individual site characteristics include:

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1. The current and projected use of the affected groundwater and surface water in the vicinity of the site;

2. The current and projected land use of the area affected by the contamination;

3. The exposed human population and ecological receptors, including the presence of threatened or endangered species (flora

and fauna). A general literature review and analysis based on site-specific conditions may be sufficient;

4. The location of the plume;

5. The degree and extent of contamination;

6. The rate and direction of migration of the plume;

7. The apparent or potential rate of degradation of petroleum products' contaminants of concern through natural attenuation;

and

8. The potential for further migration in relation to the source property boundary;

(c) To establish the horizontal extent and thickness of free product. If the soil concentration of a petroleum products' contaminant of concern is above its soil saturation concentration ( $C_{sat}$ ), free product may be present [refer to the technical report

referenced in subsection 62-770.140(1), F.A.C., for development of soil CTLs based on  $C_{sat}$ ];

(d) To determine whether contamination is present and the types of contaminants present, and to determine the horizontal and

vertical extent of contamination in every medium found to be contaminated (for soil in the unsaturated zone, to the more stringent

of the direct exposure residential soil CTLs and the applicable leachability-based soil CTLs provided in Chapter 62-777, F.A.C.,

Table II; and for groundwater, to the groundwater CTLs or to the surface water CTLs provided in Chapter 62-777, F.A.C., Table I,

as applicable);

(e) To establish the background concentrations;

(f) To estimate the total mass and mass distribution of petroleum or petroleum products in the subsurface as product entrapped

above the water table, free product, and product entrapped below the water table;

(g) To determine whether interim source removal pursuant to Rule 62-770.300, F.A.C., is warranted;

(h) To describe relevant geologic and hydrogeologic characteristics that influence migration and transport of petroleum

products' contaminants of concern at the site, unless the site meets the No Further Action criteria of subsection 62-770.680(1),

F.A.C.:

1. To describe the lithology and horizontal and vertical continuity of units, such as the presence of karst features, bedrock,

native soil, and fill material, in the areas affected and expected to be affected by the discharge(s);

2. To identify the aquifer or aquifers and confining units affected and expected to be affected by the discharge(s) and to determine the groundwater classification, hydraulic conductivity, transmissivity, and storativity of the aquifer or aquifers;
  3. To identify and characterize any perched zone, if present;
  4. To determine the horizontal and vertical rate and direction of groundwater flow (at all affected depths, as appropriate), to determine the extent of water table fluctuation, to evaluate the potential effect of seasonal variations and vertical groundwater flow components on the rate and direction of groundwater flow, to determine the hydraulic interaction between groundwater and any surface water within the vicinity of the site, and to determine whether there are any tidal effects for sites located near marine surface water; and
  5. To determine other mechanisms of transport of petroleum products' contaminants of concern in the immediate vicinity of the site, including rate and direction of movement of petroleum products' contaminants of concern in sewer lines, subsurface utility conduits or vaults, soil, sediment, and surface water, as applicable;
- (i) To determine by means of a well survey whether any public water supply wells, as defined in Chapter 62-550, F.A.C., are present within a 1/2 mile radius of the site, whether the site is located within the regulated wellhead protection zone of a public water supply well or well field, and whether any private water supply wells (including potable, irrigation, and industrial wells) are present within a 1/4 mile radius of the site, unless the site meets the No Further Action criteria of subsection 62-770.680(1), F.A.C.
- If contamination beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter is discovered at any time, within 60 days of such discovery the responsible party shall conduct the well survey pursuant to paragraph 62-770.600(4)(o), F.A.C., and submit a report to the Department or to the FDEP local program, and to the County Health Department, that provides the results of the well survey in accordance with the requirements of subparagraphs 62-770.600(8)(a)10. and 62-770.600(8)(a)11., F.A.C., and that provides the results of any required sampling pursuant to paragraph 62-770.600(4)(p), F.A.C., based on the results of the well survey. These results shall include a listing of the sampled wells, the rationale for their selection, the contaminants analyzed, and the analytical results;
- (j) To determine whether any surface water will be exposed to contamination that migrates beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter;
- (k) If non-petroleum products' contaminants of concern are detected during the assessment, to identify the general location of the source in relation to the site and to evaluate whether the non-petroleum products' contaminants of concern may have an effect on future rehabilitation activities of the petroleum contamination;
- (l) To report any off-site activities (for example, dewatering, active remediation, or flood control pumping) in the immediate vicinity of the site that may have an effect on the groundwater flow at the site, unless the site meets the No Further Action criteria of subsection 62-770.680(1), F.A.C.; and
- (m) To facilitate the selection of the most cost-effective remediation strategy for the site that is protective of human health and the environment, and considers the proposed property use, identifies risks posed by the contamination based on the proposed use, and describes how those risks will be managed, unless No Further Action is deemed appropriate pursuant to the provisions of subsection 62-770.680(1), F.A.C.

(4) The site assessment shall include tasks that are necessary to achieve objectives described in subsection 62-770.600(3), F.A.C., and may include the following, as applicable:

- (a) Use of geophysical equipment such as magnetometers, ground penetrating radar, or metal detectors to detect petroleum storage tank system components;
- (b) Use of borehole geophysical equipment and methods to determine geologic and hydrogeologic characteristics of affected and potentially affected hydrogeologic zones, including a determination of whether pockets of petroleum or petroleum products exist in areas where karst formations are present;
- (c) Sampling of undisturbed soil above and below the water table using hand augers, hollow stem augers with split spoons or Shelby tubes, direct push technology, or other available technologies, to obtain information on site stratigraphy and on product entrapped below the water table, to determine geotechnical parameters and vertical hydraulic conductivity of confining or semi-confining zones, and to assess the appropriateness of natural attenuation monitoring;
- (d) Use of visual observations to determine whether soil contaminated or saturated with used oil is present. If the presence of soil contaminated or saturated with used oil is identified, at least one grab sample from the most visibly stained area shall be collected for analyses for the used oil parameters as listed in Table C. If no visual signs of contamination are identified a soil sample for laboratory analyses is not required, except that if used oil contamination had been reported, one grab sample shall be collected for laboratory analyses from the location where used oil contamination was identified in the past, and analyzed for VOHs, PAHs, TRPHs, PCBs, arsenic, cadmium, chromium, and lead. If soil visually stained or saturated with used oil is excavated pursuant to paragraph 62-770.300(3)(a), F.A.C., at least one grab sample from the bottom of the excavation, if the water table was not reached, and at least one grab sample from the wall of the excavation at an equivalent depth of the soil visually stained or saturated with used oil that was removed, shall be collected for analyses for contaminants of concern detected in the sample collected in the most visibly stained area or in the sample(s) collected for disposal purposes, to confirm that all contaminated soil was removed;
- (e) Use of field soil screening techniques that shall be demonstrated to be appropriate for the site conditions and the physical and chemical characteristics of the petroleum products' contaminants of concern, to determine the optimal locations for collection of samples for laboratory analyses. The laboratory analyses specified in Table B shall be performed to confirm the screening results.
- (f) Sampling of soil from the unsaturated zone for the following criteria, as applicable:
  - 1. Appropriate laboratory analyses to determine the degree and extent of soil contamination and, as applicable, the background concentrations. These analyses shall be performed on a minimum of three grab samples with high, medium, and low screening results for the site. These analyses shall be performed per source area and per sampling event, except that only one representative sample collected from the area most likely to be contaminated shall be sufficient if the field screening results indicate that contaminated soil is not present. The actual number of laboratory samples shall be based on the horizontal and vertical extent of contamination and the degree of correlation between field soil screening and laboratory results. If the 95% UCL approach pursuant to subparagraphs 62-770.680(1)(c)1., 62-770.680(2)(c)1., and 62-770.680(3)(c)1., F.A.C., is utilized, the soil sampling plan shall



account for factors such as discrete variations in the lithology, depth to the water table, and the chemical and physical properties of the petroleum products' contaminants of concern, and the number of samples shall be sufficient to identify the area(s) of highest contaminant concentrations and to allow the calculation of an exposure unit average concentration. [Refer to the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance.];

2. Measurement of appropriate soil properties such as texture, pH, moisture content, dry bulk density, organic carbon content, and infiltration rate using the test methods specified in Chapter 62-777, F.A.C., Table III for the development of alternative soil CTLs in accordance with the technical report referenced in subsection 62-770.140(1), F.A.C. Measurements shall be made on soil from within the contaminated area when feasible. Otherwise, measurements may be made on soil from an alternative location that has equivalent soil properties;

3. Fractionation laboratory analyses for TRPHs to determine if the site-specific concentrations of the TRPH fractions exceed the soil CTLs of the TRPH fractions developed using one of the sub-classification methodologies described in Appendix C of the technical report referenced in subsection 62-770.140(1), F.A.C. Fractionation and FL-PRO analyses for TRPHs shall be performed on sub-samples from at least one grab soil sample collected from each source area that exceeds the applicable default soil CTLs for TRPHs specified in Chapter 62-777, F.A.C., Table II, or alternative soil CTLs for TRPHs established pursuant to Rule 62-770.680, F.A.C., with the actual number of samples based on the horizontal and vertical extent of contamination and the site-specific stratigraphy;

4. Direct leachability testing by USEPA Test Method 1312, Synthetic Precipitation Leaching Procedure (SPLP) extraction, or USEPA Test Method 1311, Toxicity Characteristic Leaching Procedure (TCLP) extraction if the contamination is derived from used oil or similar petroleum products, followed by the appropriate analyses of the leachate. Leachability and total soil concentration analysis for the appropriate laboratory analyses shall be performed on sub-samples from at least one grab soil sample - 957 collected from each source area that exceeds the applicable leachability-based soil CTLs specified in subparagraph 62-770.680(1)(c)2., F.A.C., or established pursuant to subparagraph 62-770.680(2)(c)2. or 62-770.680(3)(c)2., F.A.C., with the actual number of samples based on the horizontal and vertical extent of contamination and the site-specific stratigraphy; or

5. Hazardous waste characterization by USEPA Test Method 1311 TCLP extraction followed by the appropriate analysis of the leachate, if the information indicates that the soil has the potential to be a hazardous waste;

(g) Sampling of soil from the saturated zone to estimate the mass and mass distribution of petroleum products' contaminants of concern below the water table;

(h) Use of piezometers or monitoring wells to determine the frequency of occurrence, horizontal extent, and thickness of free product;

(i) Use of monitoring wells, piezometers, or other sampling and measurement techniques to obtain a three-dimensional evaluation of the source of contamination, of the migration of petroleum products' contaminants of concern below the water table, of groundwater flow, and of relevant hydrologic parameters;

(j) Use of piezometers or monitoring wells to determine horizontal direction(s) of groundwater flow and horizontal and vertical hydraulic gradients, as applicable (groundwater level measurements shall be made within a 24-hour period);

(k) Survey of every top-of-casing. Unless the elevation of each top-of-casing is determined in reference to a single benchmark of an arbitrary elevation, the survey shall be completed by closing the loop for each pair of adjacent monitoring wells or piezometers or with the first top-of-casing surveyed;

(l) Use of field screening techniques (for example, use of temporary wells, piezometers, or direct push technology to obtain groundwater samples for on-site analyses using gas chromatography) to optimize monitoring well placement;

(m) Sampling of monitoring wells for the appropriate laboratory analyses, with the most recent sampling of representative monitoring wells having occurred no more than 270 days prior to Site Assessment Report submittal, to determine the degree and extent of groundwater contamination and the background concentrations, if applicable, such that:

1. Drill cuttings and drilling mud generated during monitoring well installation shall be handled and disposed of in such a manner that contamination is not spread into previously uncontaminated or less contaminated media;
2. Development water and purge water shall be handled and disposed of in such a manner that contamination is not spread into previously uncontaminated or less contaminated media; and
3. If an interim source removal was performed and No Further Action pursuant to subsection 62-770.680(1), F.A.C., will be recommended, one of the following criteria shall be met pursuant to Rule 62-770.690, F.A.C.:
  - a. If groundwater contamination was present prior to the interim source removal, groundwater concentrations shall meet the No Further Action criteria of subsection 62-770.680(1), F.A.C., for at least two consecutive sampling events of representative monitoring wells, performed a minimum of three months apart; or
  - b. If contamination was only present in the unsaturated zone prior to the interim source removal, groundwater concentrations shall meet the No Further Action criteria of subsection 62-770.680(1), F.A.C., during only one sampling event of representative monitoring wells;

(n) Sampling of surface water and sediment for the appropriate laboratory analyses to determine the degree and extent of surface water and sediment contamination and the background concentrations, if applicable;

(o) Inspection of public records (such as those at the local Department of Health office, at the appropriate Water Management District office, and at local municipalities), and performance of a field reconnaissance, as appropriate, to locate all water supply wells (including potable, irrigation, and industrial wells) pursuant to paragraph 62-770.600(3)(i), F.A.C.;

(p) If the possibility exists that the contamination may have affected public or private water supply wells, sampling of the well or wells for the appropriate laboratory analyses, with the consent of the owner(s), to determine whether any contamination is present;

(q) Performance of tests to determine aquifer characteristics, if appropriate, on different strata of the surficial aquifer or of different aquifers, if applicable, using water-table monitoring wells, intermediate depth monitoring wells, and vertical extent monitoring wells. Performance of a pumping test may be deferred until the Remedial Action Plan phase if groundwater extraction is proposed pursuant to the provisions of Rule 62-770.700, F.A.C. If a pumping test is performed within the plume, at least one sample of the groundwater withdrawn during the test shall be collected at the end of the pumping test and analyzed for the appropriate petroleum products' contaminants of concern and physical properties (for example, Hardness, Iron, Total Dissolved Solids, and Total Suspended Solids) that may affect the treatment system and disposal options;

(r) Use of available and appropriate literature in conjunction with site-specific lithologic logs to identify aquifers present

beneath the site. An analysis for Total Dissolved Solids shall be used if it is chosen to demonstrate to the Department or to the FDEP local program that the background quality of the groundwater on-site would allow it to be classified as an area of G-III groundwater;

(s) Review of historical land use records and existing aerial photographs to determine past uses of the property and location(s) of previous storage tank system(s);

(t) Performance of a professional land survey of the site in order to develop an accurate base map, if the Department or the FDEP local program determines that the site map provided in a report is not accurate;

(u) Establishment of the parameters or exposure assumptions that will be used to develop the alternative CTLs pursuant to Rule 62-770.650, F.A.C., if the responsible party chooses this option; and

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(v) Use of other methods approved by the Department pursuant to Rule 62-770.890, F.A.C.

(5) The analyses for petroleum products' contaminants of concern in representative surface water, groundwater, soil, and sediment samples, as applicable, shall be performed using the analytical procedures listed in Tables B, C, and D. The type of petroleum or petroleum products causing the contamination will determine which table is appropriate. Equivalent methods may be used if approved through protocols described in Chapter 62-160, F.A.C.

(a) If petroleum product discharges are from the Gasoline or Kerosene Analytical Groups, analyses shall be performed as described in Table B, except that:

1. If the site is anticipated to meet the No Further Action criteria of Rule 62-770.680, F.A.C., and the site is contaminated by products solely from the Gasoline Analytical Group, analytical screening of the monitoring wells for Benzene, Ethylbenzene, Toluene, total Xylenes, MTBE, and PAHs (using applicable methods in Table B) may be performed; or
2. If the site is anticipated to meet the No Further Action criteria of Rule 62-770.680, F.A.C., and the site is contaminated by products from the Kerosene Analytical Group, analytical screening of the monitoring wells for Benzene, Ethylbenzene, Toluene, total Xylenes, MTBE, PAHs, and TRPHs (using applicable methods in Table B) may be performed.

(b) If petroleum product discharges are from used oil, from an identified product not listed in the Gasoline or Kerosene Analytical Groups, or from a product for which the specific identity is unknown, analyses shall be performed as described in Table C.

(c) If the contamination is derived from petroleum as defined in Section 376.301, F.S., analyses shall be performed as described in Table D.

(6) If initial testing of representative monitoring well(s), performed pursuant to subsection 62-770.600(5), F.A.C., does not indicate the presence of any petroleum products' contaminants of concern within a specific analytical procedure, or indicates that the presence of a contaminant of concern is due to a background concentration, subsequent testing at the site need not include that analytical procedure.

(7) Within 270 days of discovery of contamination, the responsible party shall submit to the Department or to the FDEP local program for review two copies of a Site Assessment Report (that may reference previously submitted documents). Applicable portions of the Site Assessment Report shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C.

(8) The Site Assessment Report shall:

(a) Summarize all tasks that were implemented pursuant to subsections 62-770.600(3) and 62-770.600(4), F.A.C., and

summarize the results obtained. All maps shall be in black and white, except the topographic map required by subparagraph 62-770.600(8)(a)2., F.A.C. (if a color map is submitted, a duplicate black and white map is required), and all site maps shall indicate the North direction, be drawn to scale, and include a graphical representation of the scale used. The following shall be included, when applicable:

1. A detailed summary of site history and operations, including the type and length of time petroleum or specific petroleum products were stored/distributed;
2. A copy of the portion of the most recent USGS topographic map(s), including quadrangle name and scale with contour interval(s) labeled, that clearly identifies the site in relation to at least one mile radius of the surrounding area;
3. A vicinity map that shows pertinent features, such as local drainage features, land cover, property boundaries, supply wells and, particularly, any potential off-site sources of petroleum or petroleum products contamination (such as former or current gas stations), and non-petroleum product sources (such as former or current dry cleaners) if non-petroleum products' contaminants of concern were identified during the assessment. The FDEP facility identification numbers shall be provided if available. If the subject site meets the No Further Action criteria of subsection 62-770.680(1), F.A.C., a vicinity map is not required;
4. One or more scaled site maps that show all pertinent surface and subsurface features such as former and current tank farms, integral piping, dispensers, monitoring wells, buildings, land cover, streets, right-of-ways, locations and elevations (if significantly different) of property boundaries and surrounding properties, utilities, sewers, floor drains, and subsurface stormwater drainage structures present in the immediate vicinity of the contamination;
5. When available, a copy of the most recent and all previously failed tank and integral piping tightness tests performed on the storage tank system(s) known or suspected to be the source of the contamination and all available records on storage tank or integral piping repairs performed on such system(s);
6. Details of any preliminary assessment or interim source removal activities performed in relation to the petroleum or petroleum products contamination at the site, such as product recovery, groundwater recovery, and contaminated soil removal (summarized in graphical and tabular form);
7. Data and calculations used to determine the top-of-casing elevations and the accuracy of the survey performed pursuant to paragraph 62-770.600(4)(k), F.A.C.;
8. Tables that list the top-of-casing elevations, screened intervals, depths to groundwater, water-level elevations obtained at least twice, at least one month apart, and the dates the data were obtained;
9. Scaled site maps that illustrate the water-level elevations calculated at each monitoring well, piezometer, and staff gauge where surface water is a concern, and depicting the estimated elevation contours and an interpretation of groundwater flow direction. If different strata of the same aquifer, or if different aquifers, are affected, separate figures shall be submitted for each date on which measurements were recorded, depicting flow in each stratum or aquifer. If the site's groundwater is tidally-influenced, separate figures shall be submitted depicting flow at high and low tide. If the site is affected by seasonal groundwater variations, separate figures shall be submitted depicting the seasonal changes in the groundwater flow direction;
10. A table that summarizes the use and well construction details, if available, and locational information (i.e., the nearest street address, if available, or latitude and longitude coordinates, if the street address is not available), of all the water supply wells

identified during the well survey performed pursuant to paragraph 62-770.600(3)(i), F.A.C.;

11. A map that is keyed to the table described in subparagraph 10., and shows the approximate location(s) of the water supply well(s) identified during the well survey performed pursuant to paragraph 62-770.600(3)(i), F.A.C., in relation to the subject site;

12. The results from slug tests on a minimum of three monitoring wells or from a pumping test, performed in each affected

aquifer zone monitored to determine aquifer properties, and including a description of methods used, assumptions made, field data,

and calculations, unless the site meets the No Further Action criteria of subsection 62-770.680(1), F.A.C.;

13. The result of a calculation of horizontal groundwater flow velocity ( $v$ ) for the site, using the formula  $v = KI/n$ , where  $K$  is

the average horizontal hydraulic conductivity,  $I$  is the average horizontal hydraulic gradient, and  $n$  is the estimated effective soil

porosity, unless the site meets the No Further Action criteria of subsection 62-770.680(1), F.A.C.;

14. A description of any geophysical methods used for the project;

15. A description of the site-specific stratigraphy, based on the lithologic logs prepared during soil assessment and monitoring

well installation and during drilling of standard penetration test borings (including composition, thickness, and continuity of

various lithologic units);

16. At least one cross-section that illustrates the site-specific stratigraphy and approximate concentrations of applicable

petroleum products' contaminants of concern;

17. Details of any other assessment methodology used at the site, including any field screening techniques and measures of

biological activity (for example, dissolved oxygen or nutrient levels);

18. A table that summarizes the field soil screening results obtained at each sampling location and depth, and a listing of the

date(s) the work was performed;

19. One or more scaled site maps that show all soil sampling locations for field screening or laboratory analyses, in relation to

the former and current petroleum or petroleum products tank systems (tanks, integral piping, and dispensers) and any excavated

areas, and that illustrate the horizontal and vertical extent of unsaturated zone soil contamination when soil contamination is

detected;

20. Piezometer, monitoring well, and recovery well construction details and construction diagrams, including methods and

materials, field sampling data sheets, lithologic logs, methods and volumes of groundwater removed during well development;

21. A table that is updated any time additional piezometers, monitoring wells, or recovery wells are installed and that

summarizes the well construction details (including the top-of-casing elevation, total depth, screen length, and depth of the top of

the screen below land surface) of all monitoring wells (including compliance wells), piezometers, and recovery wells;

22. A current table that summarizes free product thickness measured, volumes recovered, and date(s) measurements were

recorded, if applicable;

23. An estimate of the total mass and mass distribution of petroleum or petroleum products in the subsurface as product

entrapped above the water table, free product, and product entrapped below the water table, and a scaled site map that shows the

estimated horizontal extent of free product;

24. All applicable information required by subsection 62-770.400(2), F.A.C.;

25. Separate tables by medium (soil, sediment, groundwater, and surface water) that list all contaminants detected, their

corresponding CTLs and the basis or reason for any alternative CTLs, detection limits achieved for non-detected analytes, and

analyses performed, and that summarize all available analytical results;

26. One or more scaled site maps that show any areas excavated and all groundwater and surface water sampling locations, and that illustrate the degree and extent of groundwater and surface water contamination using sufficient isoconcentration lines to help identify source area(s) as well as the extent of the plume(s) (separate maps for Benzene, for Total Volatile Organic Aromatics, and for all other significant/widespread petroleum products' contaminants of concern), and

27. A description of the treatment or disposal methods of any investigation-derived waste generated during the assessment phase and any documentation that confirms the proper treatment or proper disposal of the waste, as applicable.

(b) Summarize conclusions regarding site assessment objectives outlined in subsection 62-770.600(3), F.A.C., and include one of the following:

1. A No Further Action Proposal without institutional controls or without institutional and engineering controls shall be included if the site meets the applicable No Further Action criteria of subsection 62-770.680(1), F.A.C., or a No Further Action Proposal with institutional controls or both institutional and engineering controls may be included if the site meets the applicable No Further Action criteria of subsection 62-770.680(2) or 62-770.680(3), F.A.C.;
2. A Natural Attenuation Monitoring Plan may be included if the site meets the Natural Attenuation Monitoring criteria of Rule 62-770.690, F.A.C.;
3. A Risk Assessment work plan or a recommendation to prepare a Risk Assessment shall be included if the responsible party chooses to justify alternative CTLs using risk assessment studies demonstrating that human health, public safety, and the environment are protected to at least the same degree provided by the CTLs referenced in this chapter. The work plan shall include
  - 960 documentation adequate to support the request to do one or more of the task elements of subsection 62-770.650(1), F.A.C., and shall specify the parameters or exposure assumptions that will be used to develop the alternative CTLs pursuant to Rule 62-770.650, F.A.C.; or
4. A recommendation to prepare a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C., shall be included unless a recommendation pursuant to subparagraph 62-770.600(8)(b)1., 62-770.600(8)(b)2., or 62-770.600(8)(b)3., F.A.C., is included.

(9) Within 60 days of receipt of a Site Assessment Report or of additional information pursuant to subsection 62-770.800(3), F.A.C., the Department or the FDEP local program shall:

- (a) Provide the responsible party with written approval of the Site Assessment Report and:
  1. If the No Further Action Proposal is approved, with a Site Rehabilitation Completion Order as referenced in subsection 62-770.680(7), F.A.C.;
  2. If the Natural Attenuation Monitoring Plan is approved, with a Natural Attenuation Monitoring Plan Approval as referenced in paragraph 62-770.690(5)(a), F.A.C.;
  3. If the Risk Assessment work plan or the recommendation to prepare a Risk Assessment is approved, with a written notification that the Risk Assessment shall be prepared pursuant to Rule 62-770.650, F.A.C.; or
  4. If the recommendation to prepare a Remedial Action Plan is approved, with a written notification that the Remedial Action Plan shall be prepared pursuant to Rule 62-770.700, F.A.C.; or
- (b) Notify the responsible party in writing, stating:
  1. The reason(s) why the Site Assessment Report does not contain information adequate to support the conclusions regarding the applicable site assessment objectives outlined in subsection 62-770.600(3), F.A.C.; or
  2. The reason(s) why the proposal, plan, or recommendation submitted pursuant to paragraph 62-770.600(8)(b), F.A.C., is not

supported by the applicable criteria.

(10) Site assessment activities shall not be deemed complete until such time as a Site Assessment Report is approved.

(11) If the Site Assessment Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection

62-770.600(3), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph

62-770.600(9)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two

copies of a Site Assessment Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

*Specific Authority 376.303, 376.3071, 403.0877 FS Law Implemented 376.3071, 403.0877 FS History--New 11-1-87, Amended 2-4-88, Formerly*

*17-70.008, Amended 2-21-90, Formerly 17-770.600, Amended 9-3-96, 9-23-97, 8-5-99, 4-17-05*

**62-770.610 Fate and Transport Model and Statistical Method Requirements.**

(1) Fate and Transport Models.

(a) Any fate and transport model used to support an evaluation pursuant to the provisions of Rules 62-770.650, 62-770.680,

and 62-770.690, F.A.C., shall be a fate and transport model with the ability to adequately simulate movement and degradation of

petroleum products' contaminants of concern in the aquifer over time and distance, taking into account attenuation mechanisms

including biological, physical, and chemical processes. The fate and transport model shall be appropriate for the site conditions and

shall be selected from the ASTM document referenced in subsection 62-770.140(3), F.A.C., or from the list of approved fate and

transport models maintained by the Department, a copy of which is available upon request.

(b) Fate and transport models not listed in the ASTM document referenced in subsection 62-770.140(3), F.A.C., or on the list

of approved fate and transport models maintained by the Department, may be submitted to the Department for approval and for

inclusion on the list of approved fate and transport models maintained by the Department. To be considered for approval by the

Department, documentation that adequately demonstrates that the above criteria have been met shall be submitted to the Bureau of

Petroleum Storage Systems, 2600 Blair Stone Road, MS 4575, Tallahassee, Florida 32399-2400. Any such request for Department

approval shall set forth at a minimum the following information:

1. The fate and transport model type;

2. The name and address of the developer;

3. The fate and transport model description;

4. A list of input parameters;

5. The applicable boundary conditions and limitations on the appropriate use of the fate and transport model;

6. A description of the methods available for fate and transport model calibration and examples of calibration of the model with

measured site data;

7. Documentation of code testing that has been done (for example, hand calculations to demonstrate that the model formulas

were programmed correctly);

8. At least one independent reference knowledgeable of the theory, or experienced in the use, of fate and transport models, who

must be a Professional Engineer registered pursuant to Chapter 471, F.S., or a Professional Geologist registered pursuant to Chapter

492, F.S.; and

9. Any approvals or denials of the fate and transport model received from other states or from a federal agency.

(2) Statistical Methods.

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(a) Any statistical method used to support an evaluation pursuant to the provisions of subparagraph 62-770.680(1)(c)1.,

62-770.680(2)(c)1., or 62-770.680(3)(c)1., F.A.C., shall be a statistical method appropriately based on statistical properties of the

site-specific data set such as the number of samples, distribution of the data set, and the percent of non-detect sample results. The

statistical method shall be appropriate for the site conditions and shall be selected from the list of approved statistical methods

maintained by the Department, a copy of which is available upon request.

(b) Statistical methods not on the list of approved statistical methods maintained by the Department may be submitted to the

Department for approval and for inclusion on the list of approved statistical methods maintained by the Department. To be

considered for approval by the Department, documentation that adequately demonstrates that the above criteria have been met shall

be submitted to the Bureau of Petroleum Storage Systems, 2600 Blair Stone Road, MS 4575, Tallahassee, Florida 32399-2400. Any

such request for Department approval shall set forth at a minimum the following information:

1. The statistical method type;
2. The name and address of the developer;
3. The statistical method description;
4. A list of input parameters;
5. The limitations on the appropriate use of the statistical method;
6. A list of assumptions underlying the construction of the statistical method and the methodology used to validate the assumptions;

7. Documentation of code testing that has been done (for example, hand calculations to demonstrate that the statistical method

formulas were programmed correctly);

8. At least one independent reference knowledgeable of the theory of the proposed statistical method, and trained in the theory,

or experienced in the use, of statistical methods, who must have an advanced degree in statistics or mathematics; or documentation

that the proposed statistical methods are readily available, in wide use, and have been published in professional journals or

reviewed in a statistical textbook; and

9. Any approvals or denials of the statistical method received from other states or from a federal agency.

(3) Within 60 days of receipt of a request for approval of a fate and transport model, or within 180 days of a request for

approval of a new statistical method, the Department shall issue an Order:

(a) Providing the requester with approval of the fate and transport model or statistical method; or

(b) Notifying the requester of the reason(s) why the request does not adequately demonstrate that the requirements of

subsection 62-770.610(1) or 62-770.610(2), F.A.C., as applicable, have been met.

(4) If the Fate and Transport Model or Statistical Method submittal is incomplete in any respect, or is insufficient to satisfy the

objectives of subsection 62-770.610(1) or 62-770.610(2), F.A.C., as applicable, the Department shall inform the requester pursuant

to paragraph 62-770.610(3)(b), F.A.C., and the requester shall submit to the Department a revised request that addresses the

deficiencies within 60 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the fate

and transport model or statistical method submitted for approval by the Department shall not be used.

(5) The Department's Order shall be agency action, reviewable pursuant to Sections 120.569 and 120.57, F.S. *Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071 FS. History--New 8-5-99, Amended 4-17-05.*

#### **62-770.650 Risk Assessment.**

(1) During the risk assessment process, the responsible party is encouraged to have discussions with the Department at various

decision points to establish applicable exposure factors, relevant receptors, and risk management options based on the current and

projected land use(s) at the site. If a risk assessment is performed, the following risk assessment task elements shall be performed,

as appropriate:

(a) An exposure assessment that identifies pathways and routes by which human and environmental receptors may be exposed



to petroleum products' contaminants of concern and determines levels of these contaminants to which human and environmental

receptors may be exposed. The exposure assessment shall:

1. Identify actual and potential exposure pathways and routes;
2. Identify actual and potential human and environmental receptors for each exposure pathway, and sensitive sub-populations;
3. Determine expected concentrations of petroleum products' contaminants of concern to which actual and potential human

and environmental receptors may be exposed, with the most recent sampling of representative monitoring wells having occurred no

more than 270 days prior to Risk Assessment Report submittal;

4. Determine exposure factors (exposure duration and frequency) based on site-specific characteristics, including consideration

of current and plausible projected land uses. Institutional and engineering controls may be proposed in order to ensure that exposure

factors do not change; and

5. Estimate the doses of petroleum products' contaminants of concern received by relevant receptors.

(b) A toxicity assessment that determines human health and environmental criteria for petroleum products' contaminants of

concern found at the site. The criteria, taking into consideration acute and chronic health effects associated with short-term and

long-term exposure, shall be applicable to exposure pathways and routes identified in the exposure assessment, including, as

appropriate:

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1. Potable water exposure from ingestion, dermal contact, and inhalation of vapors and mists;

2. Non-potable water exposure from dermal contact, inhalation of vapors and mists, ingestion of food crops irrigated with such

water, lawn watering, and other related exposures, and exposures to pets and livestock from ingestion;

3. Soil exposure from ingestion, dermal contact, inhalation, and ingestion by humans or animals of food crops grown in

contaminated soil; and

4. Non-potable surface water exposure from ingestion, dermal contact, and inhalation of vapors and mists. Adverse effects on

freshwater or marine biota (including any bio-accumulative effects in the food chain) and on humans (for example, through

incidental ingestion and dermal contact while using the resource for recreational purposes or fish consumption) shall be considered.

(c) A risk characterization that utilizes the results of the exposure assessment and the toxicity assessment to characterize

cumulative risks to the affected population(s) and the environment from petroleum products' contaminants of concern found at the

site. Based on the concentrations of petroleum products' contaminants of concern found at the site, the characterization shall

include:

1. Risks to human health and safety from exposure to the contamination;
2. Risks from the contamination to non-human species and ecosystems; and
3. Derivation of apportioned alternative CTLs, as applicable [refer to Appendix C of the technical report referenced in

subsection 62-770.140(1), F.A.C., for guidance on the derivation of alternative CTLs for TRPHs based on a sub-classification

methodology; and to Chapter 62-777, F.A.C., Table III for methods to be used in determining soil properties for the derivation of

alternative CTLs based on site-specific soil characteristics]. In developing alternative CTLs, when scientific data are available the

potential for additive, synergistic, or antagonistic interactions among petroleum products' contaminants of concern and the

potential for exposure to petroleum products' contaminants of concern via multiple pathways shall be considered based on target

organ(s) affected, mechanism(s) of toxicity, and empirical observations from clinical and laboratory studies. The default

assumptions shall be that non-carcinogenic chemicals affecting the same target organ(s)/system(s) have additive effects and that carcinogenic risk, regardless of target organ, is additive. However, non-default target organ(s)/system(s) or effects may be justified through a detailed toxicological analysis of the contaminants present at a specific site.

(d) A justification for alternative CTLs (apportioned if applicable) for groundwater or soil. The justification for the alternative

CTLs shall be based upon the site-specific characteristics affecting the site. In establishing the alternative CTLs for groundwater or

soil, the following factors shall be used, as applicable: calculations using a lifetime excess cancer risk level of  $1.0E-6$  and a hazard

index of 1 or less, and (for groundwater only) nuisance, organoleptic, and aesthetic considerations. However, the Department shall

not require site rehabilitation to achieve a CTL for an individual contaminant that is more stringent than the site-specific

background concentration for that contaminant or the best achievable detection limit for that contaminant. The justification shall be

based on:

1. The site-specific characteristics that affect the site, including:

a. The present and projected uses of the affected aquifer(s) and adjacent surface water, with particular consideration of the

probability that the contamination is substantially affecting, or will migrate to and substantially affect, a known public or private

source of potable water;

b. The technical feasibility of achieving the soil or water quality criteria based on a review of reasonably available technology

and costs; and

c. Site soil characteristics; and

2. The results of the exposure assessment, toxicity assessment, and risk characterization pursuant to paragraphs 62-770.650(1)(a)-(c), F.A.C.

(2) Fate and transport models for petroleum products' contaminants of concern may be employed, pursuant to Rule 62-770.610, F.A.C., to document that human health and environmental risks from the establishment of alternative CTLs are

acceptable. If a fate and transport model for petroleum products' contaminants of concern is utilized, the model shall be validated

during subsequent monitoring to justify a No Further Action Proposal, or during natural attenuation monitoring or active

remediation monitoring, and adjusted as appropriate using empirical data as the data are obtained.

(3) Within 90 days after written Departmental approval of the recommendation to prepare a risk assessment, the responsible

party shall submit to the Department for review three copies of the Risk Assessment Report.

(4) The Risk Assessment Report shall contain a description of the task elements undertaken, summarize the conclusions

obtained, include the tables required pursuant to subparagraph 62-770.600(8)(a)25., F.A.C., updated as applicable, include a scaled

site map for each contaminated medium, that illustrates the degree and extent of contamination (and, for groundwater, the flow

direction), and include one of the following:

(a) A No Further Action Proposal without institutional controls or without institutional and engineering controls shall be

included if the site meets the applicable No Further Action criteria of subsection 62-770.680(1), F.A.C., or a No Further Action

Proposal with institutional controls or both institutional and engineering controls may be included if the site meets the applicable

No Further Action criteria of subsection 62-770.680(2) or 62-770.680(3), F.A.C.;

(b) A Natural Attenuation Monitoring Plan may be included if the site meets the Natural Attenuation Monitoring criteria of

Rule 62-770.690, F.A.C.; or

(c) A recommendation to prepare a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C., shall be included unless a

recommendation pursuant to paragraph 62-770.650(4)(a) or 62-770.650(4)(b), F.A.C., is included.

(5) Within 60 days of receipt of a Risk Assessment Report or of additional information pursuant to subsection 62-770.800(3),

F.A.C., the Department shall:

(a) Provide the responsible party with written approval of the Risk Assessment Report and:

1. If the No Further Action Proposal is approved, with a Site Rehabilitation Completion Order as referenced in subsection

62-770.680(7), F.A.C.;

2. If the Natural Attenuation Monitoring Plan is approved, with a Natural Attenuation Monitoring Plan Approval as referenced

in paragraph 62-770.690(5)(a), F.A.C.; or

3. If the recommendation to prepare a Remedial Action Plan is approved, with a written notification that the Remedial Action

Plan shall be prepared pursuant to Rule 62-770.700, F.A.C.; or

(b) Notify the responsible party in writing, stating:

1. The reason(s) why the Risk Assessment Report does not contain information adequate to support the proposed alternative

CTLs; or

2. The reason(s) why the proposal, plan, or recommendation submitted pursuant to subsection 62-770.650(4), F.A.C., is not

supported by the applicable criteria.

(6) If the Risk Assessment Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection

62-770.650(4), F.A.C., the Department shall inform the responsible party pursuant to paragraph 62-770.650(5)(b), F.A.C., and the

responsible party shall submit to the Department for review three copies of a Risk Assessment Report Addendum that addresses the

deficiencies within 60 days after receipt of the notice.

*Specific Authority 376.303, 376.3071, 403.061 FS. Law Implemented 376.3071, 403.021, 403.061, 403.062 FS. History-New 9-23-97, Amended*

*8-5-99, 4-17-05*

**62-770.680 No Further Action.**

(I) Risk Management Options Level I – A No Further Action without institutional controls or without institutional and

engineering controls shall apply if the following conditions are met:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of petroleum or petroleum products;

(b) For the purposes of Section 376.3071(11)(b)2., F.S., that only applies to sites scored 10 or less, excessively contaminated

soil does not exist;

(c) Contaminated soil is not present in the unsaturated zone, as demonstrated by the analyses of soil samples collected from

representative sampling locations (unless the Department or the FDEP local program has concurred that soil sampling is

unnecessary based on the site-specific conditions), that show that one or more of the criteria for direct exposure and one or more of

the criteria for leachability are met, as applicable:

1. Criteria for direct exposure are as follows:

a. Soil concentrations of petroleum products' contaminants of concern, or average soil concentrations of petroleum products'

contaminants of concern calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-770.680(1)(c)1.d., F.A.C.,

do not exceed the less stringent of:

(I) The residential soil CTLs specified in Chapter 62-777, F.A.C., Table II, except that if the 95% UCL approach is utilized for

any petroleum products' contaminant of concern, then the soil concentrations of petroleum products' contaminants of concern shall

not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-770.680(1)(c)1.d.(V), F.A.C.;

(II) The background concentrations; or

(III) The best achievable detection limits;

b. Soil concentrations of petroleum products' contaminants of concern, or average soil concentrations of petroleum products' contaminants of concern calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-770.680(1)(c)1.d., F.A.C., do not exceed the alternative residential soil CTLs established using site-specific soil properties pursuant to sub-subparagraph 62-770.600(4)(f)2., F.A.C., and the equations and default residential exposure assumptions specified in Chapter 62-777, F.A.C., Figures 4, 5, 6, and 7 and Table VI, except that if the 95% UCL approach is utilized for any petroleum products' contaminant of concern, then the soil concentrations of petroleum products' contaminants of concern shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-770.680(1)(c)1.d.(V), F.A.C.;

c. Soil concentrations of the site-specific fractions of TRPHs established pursuant to sub-subparagraph 62-770.600(4)(f)3., F.A.C., or average soil concentrations of the site-specific fractions of TRPHs calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-770.680(1)(c)1.d., F.A.C., utilizing the soil concentrations of the site-specific fractions of TRPHs established pursuant to sub-subparagraph 62-770.600(4)(f)3., F.A.C., do not exceed the residential soil CTLs for the TRPH fractions provided in Appendix C of the technical report referenced in subsection 62-770.140(1), F.A.C., except that if the 95% UCL approach is utilized for any petroleum products' contaminant of concern, then the soil concentrations of petroleum products' contaminants of concern shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-770.680(1)(c)1.d.(V), F.A.C.; and

d. If the 95% UCL approach is utilized to calculate average soil concentrations of petroleum products' contaminants of concern pursuant to sub-subparagraph 62-770.680(1)(c)1.a., 62-770.680(1)(c)1.b., or 62-770.680(1)(c)1.c., F.A.C. [refer to the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance], the following criteria shall be met:

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(I) The Florida-UCL tool or other approved statistical method pursuant to subsection 62-770.610(2), F.A.C., shall be used to perform the 95% UCL calculations;

(II) The maximum soil concentrations of petroleum products' contaminants of concern shall not exceed any CTL based on acute toxicity, and shall not exceed three times the applicable direct exposure soil CTLs based on chronic toxicity pursuant to sub-subparagraphs 62-770.680(1)(c)1.a., 62-770.680(1)(c)1.b., and 62-770.680(1)(c)1.c., F.A.C.;

(III) The exposure unit shall be located within the source property boundaries and shall not exceed 1/4 acre;

(IV) A minimum of 10 representative soil samples is required when the Florida-UCL tool is utilized; and

(V) If more than one petroleum products' contaminant of concern is present in the soil in the unsaturated zone at the site, the soil CTLs for all petroleum products' contaminants of concern detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance on apportioning soil CTLs]; and

2. Criteria for leachability are as follows:

a. Soil concentrations of petroleum products' contaminants of concern do not exceed the less stringent of:

(I) The groundwater and, if applicable, surface water leachability-based soil CTLs specified in Chapter 62-777, F.A.C., Table II;

(II) The background concentrations; or

(III) The best achievable detection limits;

b. Soil concentrations of petroleum products' contaminants of concern do not exceed the alternative leachability-based soil CTLs established using the equation and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative

groundwater CTLs based on site-specific background concentrations [reference sub-subparagraph 62-770.680(1)(d)1.b., F.A.C.],

and, if applicable, the alternative surface water CTLs based on site-specific background concentrations [reference subparagraph 62-770.680(1)(e)2., F.A.C.];

c. Direct leachability testing results pursuant to subparagraph 62-770.600(4)(f)4., F.A.C., demonstrate that leachate concentrations do not exceed the appropriate groundwater CTLs pursuant to paragraph 62-770.680(1)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

d. Soil concentrations of petroleum products' contaminants of concern do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-770.600(4)(f)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the appropriate groundwater CTLs pursuant to paragraph 62-770.680(1)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-770.600(4)(f)3., F.A.C., do not exceed the leachability-based soil CTLs for the TRPH fractions provided in Appendix C of the technical report referenced in subsection 62-770.140(1), F.A.C.; and

f. For soil that is and has been exposed to the elements (i.e., open ground, not covered by impermeable or semi-permeable cover) and subject to infiltration throughout the entire unsaturated zone for a minimum of two years, it has been subsequently demonstrated to the Department by a minimum of one year of groundwater monitoring data that petroleum products' contaminants of concern will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs pursuant to paragraph 62-770.680(1)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C. This demonstration shall consider site-specific characteristics such as the thickness of the unsaturated zone, depth and mass of soil contaminants, soil lithology, actual precipitation, concentration gradients, and the chemical and physical characteristics of the petroleum products' contaminants of concern.

(d) Contaminated groundwater is not present, as demonstrated by the analyses of groundwater samples collected from representative sampling locations (unless the Department or the FDEP local program has concurred that groundwater sampling is unnecessary based on the site-specific conditions), that show that criteria 1. and 2. are met:

1. Groundwater concentrations of petroleum products' contaminants of concern do not exceed the less stringent of:
  - a. The groundwater CTLs specified in Chapter 62-777, F.A.C., Table I groundwater criteria column;
  - b. The background concentrations; or
  - c. The best achievable detection limits; and
2. Groundwater concentrations of petroleum products' contaminants of concern do not exceed the surface water CTLs specified in Chapter 62-777, F.A.C., Table I freshwater surface water criteria column or marine surface water criteria column, as applicable, if the site's groundwater contamination is affecting or may potentially affect a surface water body based on monitoring well data, groundwater flow rate and direction, or fate and transport modeling;

(e) Contaminated surface water is not present, as demonstrated by the analyses of surface water samples collected from representative sampling locations (unless the Department or the FDEP local program has concurred that surface water sampling is unnecessary based on the site-specific conditions), that show that concentrations of petroleum products' contaminants of concern do not exceed the less stringent of:

1. The applicable surface water CTLs specified in Chapter 62-777, F.A.C., Table I freshwater surface water criteria column or  
marine surface water criteria column;  
2. The background concentrations; or  
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3. The best achievable detection limits; and  
(f) Contaminated sediment is not present, as demonstrated by the analyses of sediment samples collected from representative  
sampling locations (unless the Department or the FDEP local program has concurred that sediment sampling is unnecessary based  
on the site-specific conditions), or the concentrations of petroleum products' contaminants of concern in sediment do not exceed  
the background concentrations.

(2) Risk Management Options Level II – A No Further Action with institutional controls and, if appropriate, engineering  
controls shall apply if the controls are protective of human health, public safety, and the environment and are agreed to by the  
current real property owner(s) of the source property subject to the institutional or engineering controls. Fate and transport models,  
as defined in Rule 62-770.610, F.A.C., supported by a minimum of one year of monitoring data, may be utilized to justify the No  
Further Action Proposal. It shall be demonstrated to the Department or to the FDEP local program that the following conditions are  
met for those petroleum products' contaminants of concern that do not meet Risk Management Options Level I criteria of  
subsection 62-770.680(1), F.A.C.:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of petroleum or petroleum products,  
or free product removal is not technologically feasible;

(b) For the purposes of Section 376.3071(11)(b)2., F.S., that only applies to sites scored 10 or less, excessively contaminated  
soil does not exist;

(c) Alternative soil CTLs have been established by the real property owner(s) and one or more of the criteria for direct  
exposure and one or more of the criteria for leachability are met for soil in the unsaturated zone, as applicable:

1. Criteria for direct exposure are as follows:

a. Soil concentrations of petroleum products' contaminants of concern, or average soil concentrations of petroleum products' contaminants of concern calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-770.680(2)(c) I.e., F.A.C.,  
do not exceed the commercial/industrial soil CTLs specified in Chapter 62-777, F.A.C., Table II, except that if the 95% UCL  
approach is utilized for any petroleum products' contaminant of concern, then the soil concentrations of petroleum products' contaminants of concern shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-770.680(2)(c) I.e.(V), F.A.C.;

b. An engineering control that prevents human exposure (for example, permanent cover material or a minimum of two feet of  
soil) is implemented, in which case the concentrations of petroleum products' contaminants of concern in the soil below the  
permanent cover or two or more feet below land surface may exceed the direct exposure soil CTLs. Prior to Department or FDEP  
local program approval of a No Further Action with engineering controls, the responsible party shall provide certification by a  
registered Professional Engineer that to the best of his or her knowledge the engineering control is consistent with commonly  
accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented;

c. Soil concentrations of petroleum products' contaminants of concern, or average soil concentrations of petroleum products'

contaminants of concern calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-770.680(2)(c)1.e., F.A.C., do not exceed the alternative commercial/industrial soil CTLs established using site-specific soil properties pursuant to subparagraph 62-770.600(4)(f)2., F.A.C., and the equations and default commercial/industrial exposure assumptions specified in Chapter 62-777, F.A.C., Figures 4, 5, 6, and 7 and Table VI, except that if the 95% UCL approach is utilized for any petroleum products' contaminant of concern, then the soil concentrations of petroleum products' contaminants of concern shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-770.680(2)(c)1.e.(V), F.A.C.;

d. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-770.600(4)(f)3., F.A.C., or average soil concentrations of the site-specific fractions of TRPHs calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-770.680(2)(c)1.e., F.A.C., utilizing the soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-770.600(4)(f)3., F.A.C., do not exceed the commercial/industrial soil CTLs for the TRPH fractions provided in Appendix C of the technical report referenced in subsection 62-770.140(1), F.A.C., except that if the 95% UCL approach is utilized for any petroleum products' contaminant of concern, then the soil concentrations of petroleum products' contaminants of concern shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-770.680(2)(c)1.e.(V), F.A.C.; and

e. If the 95% UCL approach is utilized to calculate average soil concentrations of petroleum products' contaminants of concern pursuant to sub-subparagraph 62-770.680(2)(c)1.a., 62-770.680(2)(c)1.c., or 62-770.680(2)(c)1.d., F.A.C., [refer to the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance], the following criteria shall be met:

- (I) The Florida-UCL tool or other approved statistical method pursuant to subsection 62-770.610(2), F.A.C., shall be used to perform the 95% UCL calculations;
- (II) The maximum soil concentrations of petroleum products' contaminants of concern shall not exceed three times the applicable soil CTLs pursuant to sub-subparagraphs 62-770.680(2)(c)1.a., 62-770.680(2)(c)1.c., and 62-770.680(2)(c)1.d., F.A.C.;
- (III) The exposure unit shall be located within the source property boundaries and shall reflect normal activity patterns for the existing commercial/industrial land use with supporting institutional controls. The institutional controls shall require recalculation of the 95% UCL if the property is subdivided or land use changes such that the exposure unit utilized in the original calculation is no longer appropriate;
- (IV) A minimum of 10 representative soil samples is required when the Florida-UCL tool is utilized; and
- (V) If more than one petroleum products' contaminant of concern is present in the soil in the unsaturated zone at the site, the soil CTLs for all petroleum products' contaminants of concern detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance on apportioning soil CTLs]; and

2. Criteria for leachability are as follows:

- a. Soil concentrations of petroleum products' contaminants of concern do not exceed the alternative leachability-based soil CTLs established using the equation and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs derived pursuant to paragraph 62-770.680(2)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

b. Direct leachability testing results pursuant to subparagraph 62-770.600(4)(f)4., F.A.C., demonstrate that leachate concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.680(2)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

c. An engineering control that prevents infiltration (for example, permanent impermeable cover material) is implemented, in which case the concentrations of petroleum products' contaminants of concern in the soil below the impermeable cover may exceed the leachability-based soil CTLs. Prior to Department or FDEP local program approval of a No Further Action with engineering controls, the responsible party shall provide certification by a registered Professional Engineer that to the best of his or her knowledge the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented. It shall be demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data that petroleum products' contaminants of concern will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs pursuant to paragraph 62-770.680(1)(d), F.A.C., or, if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.680(2)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

d. Soil concentrations of petroleum products' contaminants of concern do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-770.600(4)(f)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs established pursuant to paragraph 62-770.680(2)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-770.600(4)(f)3., F.A.C., do not exceed the alternative leachability-based soil CTLs for the TRPH fractions established using the equation and assumptions specified in Chapter 62-777, F.A.C., Figure 8, the chemical/physical parameters provided in Appendix C of the technical report referenced in subsection 62-770.140(1), F.A.C., the alternative groundwater CTL for TRPHs established pursuant to paragraph 62-770.680(2)(d), F.A.C., and, if applicable, the appropriate surface water CTL for TRPHs pursuant to paragraph 62-770.680(1)(e), F.A.C.; and

f. It has been demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results that, based upon the site-specific conditions, petroleum products' contaminants of concern will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs pursuant to paragraph 62-770.680(1)(d), F.A.C., or, if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.680(2)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.; and

(d) Alternative groundwater CTLs have been established by the real property owner(s) depending on the current and projected use of groundwater in the vicinity of the site and one or more of the following criteria are met, as applicable:

1. For contamination of groundwater of low yield or poor quality, the CTLs specified in Chapter 62-777, F.A.C., Table I



groundwater of low yield/poor quality criteria column shall apply to groundwater within the property boundaries, provided that it has been demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data that groundwater concentrations of petroleum products' contaminants of concern at the property boundaries do not, and will not, exceed the appropriate groundwater CTLs pursuant to subparagraph 62-770.680(1)(d)1., F.A.C., and that the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-770.680(1)(d)2., F.A.C.;

2. An engineering control that prevents migration of the plume (for example, a permanent containment such as a barrier wall) is implemented, and it has been demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data that groundwater concentrations of petroleum products' contaminants of concern at the property boundaries do not, and will not, exceed the appropriate groundwater CTLs pursuant to subparagraph 62-770.680(1)(d)1., F.A.C., and that the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-770.680(1)(d)2., F.A.C. Periodic monitoring of the engineering control by the responsible party shall be required to verify the effectiveness of the engineering control in preventing migration of the plume. The responsible party shall report to the Department any failures of the engineering control to prevent migration of the plume within 30 days of discovery of a failure. Prior to Department or FDEP local program approval of a No Further Action with engineering controls, the responsible party shall provide

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certification by a registered Professional Engineer that to the best of his or her knowledge the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented;

3. For groundwater contamination that is affecting or may potentially affect only a marine surface water body with no other properties or freshwater surface water bodies located between the source property boundary and the marine surface water body, the CTLs specified in Chapter 62-777, F.A.C., Table I marine surface water criteria column shall apply to groundwater; and

4. For groundwater contamination that is contained within the property boundaries and limited to the immediate vicinity of the source area, and the area of groundwater contamination is less than 1/4 acre, where it has been demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results, that the groundwater contamination is not migrating away from such localized source area (the plume is stable or shrinking) and has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-770.680(1)(d)2., F.A.C., alternative groundwater CTLs shall be established using the monitoring data and, if applicable, modeling results.

(3) Risk Management Options Level III – A No Further Action with institutional controls and, if appropriate, engineering controls shall apply if the controls are protective of human health, public safety, and the environment and are agreed to by the current real property owner(s) of all properties subject to the institutional or engineering controls. Fate and transport models, as defined in Rule 62-770.610, F.A.C., supported by a minimum of one year of monitoring data, may be utilized to justify the No

Further Action Proposal. It shall be demonstrated to the Department or to the FDEP local program that the following conditions are met for those petroleum products' contaminants of concern that do not meet Risk Management Options Level I or Level II criteria of subsection 62-770.680(1) or 62-770.680(2), F.A.C.:

- (a) Free product is not present and no fire or explosive hazard exists as a result of a release of petroleum or petroleum products, or free product removal is not technologically feasible;
- (b) For the purposes of Section 376.3071(11)(b)2., F.S., that only applies to sites scored 10 or less, excessively contaminated soil does not exist;
- (c) Alternative soil CTLs have been established by the real property owner(s) and the following criteria are met for soil in the unsaturated zone:
  1. Soil concentrations of petroleum products' contaminants of concern, or average soil concentrations of petroleum products' contaminants of concern calculated based on the 95% UCL approach pursuant to this subparagraph, do not exceed the alternative direct exposure soil CTLs established pursuant to paragraph 62-770.650(1)(d), F.A.C. If more than one petroleum products' contaminant of concern is present in the soil in the unsaturated zone at the site, the soil CTLs for all petroleum products' contaminants of concern detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance on apportioning soil CTLs]. If the 95% UCL approach is utilized to calculate average soil concentrations of petroleum products' contaminants of concern pursuant to this subparagraph [refer to the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance], the following criteria shall be met:
    - a. The Florida-UCL tool or other approved statistical method pursuant to subsection 62-770.610(2), F.A.C., shall be used to perform the 95% UCL calculations;
    - b. The maximum soil concentrations of petroleum products' contaminants of concern shall not exceed three times the applicable soil CTLs [apportioned pursuant to subparagraph 62-770.680(3)(c)1., F.A.C., if applicable]; higher maximum soil concentrations of petroleum products' contaminants of concern may be utilized provided the maximum concentrations address the potential risk based on exposure to petroleum products' contaminants of concern which may cause acute toxicity, and the potential for direct contact within the exposure unit that is not equal and random; and
    - c. The exposure unit shall reflect normal activity patterns for the existing land use, with supporting institutional controls if the exposure unit exceeds 1/4 acre. The institutional controls shall require recalculation of the 95% UCL if the property is subdivided or land use changes such that the exposure unit utilized in the original calculation is no longer appropriate; and
  2. One or more of the following criteria for leachability are met, as applicable:
    - a. Soil concentrations of petroleum products' contaminants of concern do not exceed the alternative leachability-based soil CTLs established using the alternative groundwater CTLs derived pursuant to paragraph 62-770.680(3)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;
    - b. Direct leachability testing results pursuant to subparagraph 62-770.600(4)(f)4., F.A.C., demonstrate that leachate concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.680(3)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;
    - c. An engineering control that prevents infiltration (for example, permanent impermeable cover material) is implemented, in which case the concentrations of petroleum products' contaminants of concern in the soil below the impermeable cover may exceed

the leachability-based soil CTLs. Prior to Department or FDEP local program approval of a No Further Action with engineering controls, the responsible party shall provide certification by a registered Professional Engineer that to the best of his or her knowledge the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented. It shall be demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data that petroleum products' contaminants of concern will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs pursuant to paragraph - 968 62-770.680(1)(d), F.A.C., or, if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.680(3)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

d. Soil concentrations of petroleum products' contaminants of concern do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-770.600(4)(f)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs established pursuant to paragraph 62-770.680(3)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-770.600(4)(f)3., F.A.C., do not exceed the alternative leachability-based soil CTLs for the TRPH fractions established using the equation and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the chemical/physical parameters provided in Appendix C of the technical report referenced in subsection 62-770.140(1), F.A.C., the alternative groundwater CTL for TRPHs established pursuant to paragraph 62-770.680(3)(d), F.A.C., and, if applicable, the appropriate surface water CTL for TRPHs pursuant to paragraph 62-770.680(1)(e), F.A.C.; and

f. It has been demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results that, based upon the site-specific conditions, petroleum products' contaminants of concern will not leach into the groundwater at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.680(3)(d), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.; and

(d) Alternative groundwater CTLs have been established by the real property owner(s) depending on the current and projected use of groundwater in the vicinity of the site, and the following criteria are met:

1. Groundwater concentrations of petroleum products' contaminants of concern do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-770.650(1)(d), F.A.C. (apportioned, if applicable; refer to Appendix E of the technical report referenced in subsection 62-770.140(1), F.A.C., for guidance on apportioning groundwater CTLs), and the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-770.680(1)(d)2., F.A.C.; and
2. It has been demonstrated to the Department or to the FDEP local program by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results, that the plume is stable or shrinking, and groundwater

concentrations of petroleum products' contaminants of concern at the institutional control boundary do not, and will not, exceed the appropriate groundwater CTLs pursuant to paragraph 62-770.680(1)(d), F.A.C., and, if applicable, the appropriate surface water

CTLs pursuant to paragraph 62-770.680(1)(e), F.A.C.

(4) Unless the No Further Action Proposal is included in a Site Assessment Report pursuant to subparagraph 62-770.600(8)(b)1., F.A.C., or a Risk Assessment Report pursuant to paragraph 62-770.650(4)(a), F.A.C., or a Site Rehabilitation

Completion Report pursuant to subsection 62-770.690(10) or 62-770.750(7), F.A.C., when the criteria for No Further Action have

been met the responsible party shall submit to the Department or to the FDEP local program for review two copies of the No

Further Action Proposal. The No Further Action Proposal shall include the tables required pursuant to subparagraph 62-770.600(8)(a)25., F.A.C., updated as applicable. Prior to approval of a No Further Action Proposal with an institutional control

or an engineering control accompanied by an institutional control, documentation of the agreement with the real property owner(s)

of all properties subject to the institutional or engineering controls shall be submitted to the Department or to the FDEP local

program. Applicable portions of the No Further Action Proposal shall be signed and sealed by an appropriate registered

professional pursuant to Rule 62-770.490, F.A.C.

(5) Within 60 days of receipt of a No Further Action Proposal or of additional information pursuant to subsection 62-770.800(3), F.A.C., the Department or the FDEP local program shall:

(a) Provide the responsible party with a Site Rehabilitation Completion Order that approves the No Further Action Proposal; or

(b) Notify the responsible party in writing, stating the reason(s) why the No Further Action Proposal does not contain

information adequate to support the conclusion that the applicable No Further Action criteria of Rule 62-770.680, F.A.C., have

been met. Site rehabilitation activities shall not be deemed complete until such time as a No Further Action Proposal is approved.

(6) If the No Further Action Proposal is incomplete in any respect, or is insufficient to satisfy the objectives of subsection

62-770.680(1), 62-770.680(2), or 62-770.680(3), F.A.C., the Department or the FDEP local program shall inform the responsible

party pursuant to paragraph 62-770.680(5)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP

local program for review two copies of a revised No Further Action Proposal that addresses the deficiencies within 30 days after

receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the responsible party shall submit to the

Department or to the FDEP local program for review, as appropriate, two copies of a Natural Attenuation Monitoring Plan pursuant

to Rule 62-770.690, F.A.C., or two copies of a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C., within 60 days after

receipt of the notice.

(7) When a No Further Action Proposal is approved pursuant to subparagraph 62-770.600(9)(a)1. or 62-770.650(5)(a)1.,

F.A.C., or paragraph 62-770.680(5)(a), 62-770.690(11)(a), or 62-770.750(8)(a), F.A.C., the Site Rehabilitation Completion Order

shall contain, at a minimum, the following information:

(a) The FDEP facility identification number, that identifies the property where the source(s) of the contaminated site is(are) or

was(were) located;

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(b) The street address of the property where the source(s) of the contaminated site is(are) or was(were) located;

(c) The date(s) of the discharge(s) that resulted in the contaminated site;

(d) A reference to an attached map that depicts the contaminated site for which the Site Rehabilitation Completion Order is

being issued;

(c) The most recent tables generated by the responsible party pursuant to subparagraph 62-770.600(8)(a)25. or subsection 62-770.650(4), 62-770.680(4), 62-770.690(10), or 62-770.750(7), F.A.C.;

(f) The stipulation that in the event concentrations of petroleum products' contaminants of concern increase above the levels approved in the Site Rehabilitation Completion Order, or if a subsequent discharge of petroleum or petroleum products occurs at the site, the Department may require site rehabilitation to reduce concentrations of petroleum products' contaminants of concern to the levels approved in the No Further Action Proposal or otherwise allowed by Chapter 62-770, F.A.C.;

(g) If applicable, a reference to all engineering and institutional controls that were implemented at the contaminated site. For engineering controls, a brief description of the physical control and any maintenance or monitoring requirements shall be included; for institutional controls, a copy of the restrictive covenant including a reference to the book and page numbers where recorded shall be attached; and

(h) If applicable, a statement that the Site Rehabilitation Completion Order is conditioned upon such engineering and institutional controls being effective, properly maintained, and remaining in place. If applicable, the following statement shall be included: "If the real property owner proposes to remove the institutional controls or engineering controls, the real property owner shall obtain prior written approval from the Department or from the FDEP local program. The removal of the controls shall be accompanied by the immediate resumption of site rehabilitation, or implementation of other approved controls, unless it is demonstrated to the Department or to the FDEP local program that the criteria of subsection 62-770.680(1), F.A.C., are met."

(8) Prior to the Department's approval of a No Further Action Proposal with institutional controls or with engineering controls, the responsible party shall provide constructive notice of the Department's intent for such approval to the local government(s) with jurisdiction over the property(ies) subject to the institutional control, to real property owner(s) of any property subject to the institutional control, and to residents on any property subject to the institutional control. The responsible party shall provide the Department with proof of such notice that meets the requirements of subsections 62-110.106(5), 62-110.106(8), and 62-110.106(9), F.A.C., except that the notice shall be prepared and published by the responsible party within 30 days after the Department's conditional approval of the No Further Action Proposal with institutional controls. The notice shall provide the local government(s) with jurisdiction over the property(ies) subject to the institutional control, real property owners of any property subject to the institutional control, and residents of any property subject to the institutional control, the opportunity to comment to the Department within 30 days after receipt of the notice of the Department's intent of approval. Where subsection 62-110.106(8), F.A.C., requires a description of the agency action proposed, the notice shall contain "to issue a Site Rehabilitation Completion Order with institutional controls for a contaminated site." Additionally, the notice of rights language shall be replaced with "Local governments, real property owner(s) of any property subject to the institutional control, and residents of any property subject to the institutional control have 30 days from publication of this notice to provide comments to the Department." The notice also shall provide the appropriate mailing address to which comments should be sent.

(9) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

**62-770.690 Natural Attenuation Monitoring.**

(1) Monitoring of natural attenuation is an allowable strategy for site rehabilitation depending on the individual site characteristics, provided human health, public safety, and the environment are protected. The individual site characteristics may

include the current and projected use of the affected groundwater and surface water in the vicinity of the site, the current and

projected land use of the area affected by the contamination, the exposed population, the location of the plume, the degree and

extent of contamination, the rate of migration of the plume, the apparent or potential rate of degradation of petroleum products'

contaminants of concern through natural attenuation, and the potential for further migration in relation to the site's property

boundary. Fate and transport models as defined in Rule 62-770.610, F.A.C., may be utilized to support the appropriateness of

natural attenuation monitoring. Monitoring of natural attenuation is appropriate provided the following criteria are met:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of petroleum or petroleum products;

(b) Contaminated soil is not present in the unsaturated zone, except that applicable leachability-based soil CTLs may be

exceeded if it is demonstrated to the Department or to the FDEP local program that the soil does not constitute a continuing source

of contamination to the groundwater at concentrations that pose a threat to human health, public safety, and the environment, and it

is demonstrated that the rate of natural attenuation of contaminants of concern in the groundwater exceeds the rate at which

contaminants of concern are leaching from the soil, and that the presence of contaminated soil will not result in increased cleanup

cost. The determination shall be based upon individual site characteristics and demonstrated by USEPA Test Method 1312 (SPLP),

or USEPA Test Method 1311 (TCLP) if the contamination is derived from used oil or similar petroleum products, followed by the

appropriate analyses of the leachate, and based upon groundwater modeling, site stratigraphy, or site assessment results;

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(c) Petroleum products' contaminants of concern present in the groundwater above background concentrations or applicable

CTLs are not migrating beyond the temporary point of compliance or migrating vertically, that may contaminate other aquifers or

surface water resources or result in increased cleanup cost;

(d) The physical, chemical, and biological characteristics of each petroleum products' contaminant of concern are conducive to

natural attenuation;

(e) If more than one sampling event has been performed, the available data show an overall decrease in the mass of contamination; and

(f) One of the following is met:

1. The site is anticipated to meet the applicable No Further Action criteria of Rule 62-770.680, F.A.C., as a result of natural

attenuation in five years or less, the background concentrations or the applicable CTLs are not exceeded at the temporary point of

compliance as established pursuant to subsection 62-770.690(2) or 62-770.690(3), F.A.C., and the concentrations of petroleum

products' contaminants of concern do not exceed the criteria specified in Chapter 62-777, F.A.C., Table V; or

2. If the criteria of subparagraph 62-770.690(1)(f)1., F.A.C., are not met, the cost-effectiveness of natural attenuation

monitoring may be demonstrated by the following:

a. A technical evaluation of groundwater and soil characteristics, chemistry, and biological activity that verifies that the

petroleum products' contaminants of concern have the capacity to degrade under the site-specific conditions. A listing of the site-specific conditions and geochemical parameters, as applicable, is provided in Chapter 62-777, F.A.C., Table IV; b. A scientific evaluation (historical data or modeling results, as appropriate; the model used shall be demonstrated to be appropriate for the site conditions) of the plume migration in relation to the temporary point of compliance as established pursuant to subsection 62-770.690(2) or 62-770.690(3), F.A.C., an estimation of expected annual reductions of concentrations of petroleum products' contaminants of concern in monitoring wells, and an estimation of the time required to meet the applicable No Further

Action criteria of Rule 62-770.680, F.A.C. Available technical information (including historical water quality data) shall be used for model calibration; and

c. A life-cycle cost analysis of remedial alternatives.

(2) Provided human health, public safety, and the environment are protected, the point of compliance may be temporarily moved from the source of the contamination.

(a) The location of the temporary point of compliance shall be based on the individual site characteristics listed in subsection 62-770.690(1), F.A.C.

(b) The point of compliance may be temporarily moved to the property boundary, or to the edge of the plume when the plume is within the property boundary, while cleanup, including cleanup through natural attenuation processes in conjunction with appropriate monitoring, is proceeding.

(c) The temporary point of compliance may extend beyond the property boundary when accompanied by monitoring, if such extension is needed to facilitate monitoring of natural attenuation or to address the current conditions of the plume, provided human health, public safety, and the environment are protected. If the point of compliance is proposed to be temporarily extended beyond the property boundary, it cannot be extended further than the lateral extent of the plume as defined at the time of the approved site assessment. Prior to the Department authorizing a temporary extension of the point of compliance beyond the property boundary, the responsible party shall provide notice and an opportunity to comment pursuant to subsection 62-770.220(3), F.A.C.

(d) Additional notice concerning the status of the natural attenuation processes shall be similarly provided every five years to persons receiving notice pursuant to paragraph 62-770.690(2)(c), F.A.C.

(3) Where surface water is or may be exposed to groundwater contaminated with petroleum products' contaminants of concern (based on monitoring well data, groundwater flow rate and direction, or fate and transport modeling), the point of measuring compliance with the surface water standards shall be in the groundwater from the landward side immediately adjacent to the surface water body.

(4) If the criteria of subsection 62-770.690(1), F.A.C., are met, a Natural Attenuation Monitoring Plan, prepared pursuant to subsection 62-770.690(8), F.A.C., may be submitted. Unless the Natural Attenuation Monitoring Plan is included in a Site

Assessment Report pursuant to subparagraph 62-770.600(8)(b)2., F.A.C., or in a Risk Assessment Report pursuant to paragraph

62-770.650(4)(b), F.A.C., the responsible party shall submit to the Department or to the FDEP local program for review two copies of the Natural Attenuation Monitoring Plan. Applicable portions of the Natural Attenuation Monitoring Plan shall be signed and

sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C.

(5) Within 60 days of receipt of a Natural Attenuation Monitoring Plan or of additional information pursuant to subsection

62-770.800(3), F.A.C., the Department or the FDEP local program shall:

(a) Provide the responsible party with written approval of the Natural Attenuation Monitoring Plan; or

(b) Notify the responsible party in writing, stating the reason(s) why the Natural Attenuation Monitoring Plan does not contain

information adequate to support the conclusion that the applicable Natural Attenuation Monitoring criteria of Rule 62-770.690,

F.A.C., have been met.

(6) If the Natural Attenuation Monitoring Plan is incomplete in any respect, or is insufficient to satisfy the criteria of subsection

62-770.690(1), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph

62-770.690(5)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two

copies of a revised Natural Attenuation Monitoring Plan that addresses the deficiencies within 30 days after receipt of the notice. If

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the deficiencies are not timely corrected, or cannot be corrected, the responsible party shall, as appropriate, continue the

implementation of the approved Remedial Action Plan or submit to the Department or to the FDEP local program for review two

copies of a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C., within 60 days after receipt of the notice.

(7) The objective of the monitoring program shall be to meet the applicable No Further Action criteria of Rule 62-770.680,

F.A.C.

(8) The monitoring program shall be performed as specified in the Natural Attenuation Monitoring Plan approval, as follows:

(a) A minimum of two monitoring wells is required:

1. At least one well shall be located at the downgradient edge of the plume; and

2. At least one well shall be located in the area(s) of highest groundwater contamination or directly adjacent to it if the area of

highest groundwater contamination is inaccessible (for example, under a structure);

(b) The designated monitoring wells shall be sampled for analyses of applicable petroleum products' contaminants of concern

no more frequently than quarterly, as specified in the Natural Attenuation Monitoring Plan approval;

(c) Water-level measurements in all designated wells and piezometers shall be made within 24 hours of initiating each

sampling event;

(d) Within 60 days of sample collection, the responsible party shall submit to the Department or to the FDEP local program for

review two copies of a Natural Attenuation Monitoring Report. The report shall include the analytical results (laboratory report),

chain of custody record form [Form 62-770.900(2) or an equivalent chain of custody form that includes all the items required by

Form 62-770.900(2)], the tables required pursuant to subparagraph 62-770.600(8)(a)25., F.A.C., updated as applicable, site maps

that illustrate the analytical results, and the water-level elevation information (summary table and flow map).

(e) If analyses of groundwater samples indicate that concentrations of applicable petroleum products' contaminants of concern

exceed any action levels specified in the Natural Attenuation Monitoring Plan approval, the well or wells shall be resampled no

later than 30 days after the initial positive result is known. If the results of the resampling confirm that the applicable action levels

are exceeded, then the monitoring report referenced in paragraph 62-770.690(8)(d), F.A.C., shall be signed and sealed by an

appropriate registered professional pursuant to Rule 62-770.490, F.A.C., and shall include a proposal to:

1. Perform a supplemental site assessment and submit a supplemental Site Assessment Report pursuant to Rule 62-770.600,

F.A.C.;

2. Continue the implementation of the approved Natural Attenuation Monitoring Plan; or

3. Prepare and submit a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C.;



(f) On an annual basis, the analytical data shall be evaluated in reference to the expected reductions in concentrations of petroleum products' contaminants of concern in monitoring wells pursuant to subparagraph 62-770.690(1)(f)1., F.A.C., or sub-subparagraph 62-770.690(1)(f)2.b., F.A.C., as applicable, to verify progress of site rehabilitation by natural attenuation. If the annual rate of expected cleanup progress is not achieved, then the monitoring report referenced in paragraph 62-770.690(8)(d), F.A.C., shall include a proposal to:

1. Perform a supplemental site assessment and submit a supplemental Site Assessment Report pursuant to Rule 62-770.600, F.A.C.;
2. Continue the implementation of the approved Natural Attenuation Monitoring Plan; or
3. Prepare and submit a Remedial Action Plan pursuant to Rule 62-770.700, F.A.C.; and

(g) If natural attenuation monitoring follows site assessment, a minimum of two sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-770.680(1), 62-770.680(2), or 62-770.680(3), F.A.C., have been met for two consecutive sampling events. If natural attenuation monitoring follows active remediation, a minimum of four sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-770.680(1), 62-770.680(2), or 62-770.680(3), F.A.C., have been met for at least the last two sampling events. If soil contamination was present at the beginning of the monitoring program, prior to submitting the Site Rehabilitation Completion Report soil samples shall be collected at appropriate locations and depths and analyzed for the applicable petroleum products' contaminants of concern to demonstrate to the Department or to the FDEP local program that applicable soil CTLs are met.

(9) If during implementation of the Natural Attenuation Monitoring Plan the responsible party submits to the Department or to the FDEP local program a Remedial Action Plan pursuant to subsection 62-770.700(6), F.A.C., to enhance natural attenuation processes, and the Remedial Action Plan is approved, natural attenuation monitoring shall be suspended during the implementation of the enhancement and the responsible party shall perform active remediation monitoring pursuant to the approved Remedial Action Plan.

(10) When natural attenuation monitoring is considered complete pursuant to paragraph 62-770.690(8)(g), F.A.C., the responsible party shall submit to the Department or to the FDEP local program for review two copies of a Site Rehabilitation Completion Report with a No Further Action Proposal. Applicable portions of the Site Rehabilitation Completion Report shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C. The Site Rehabilitation Completion Report shall include the documentation required in paragraph 62-770.690(8)(d), F.A.C., to support the opinion that site cleanup objectives have been achieved.

(11) Within 60 days of receipt of the Site Rehabilitation Completion Report or of additional information pursuant to subsection 62-770.800(3), F.A.C., the Department or the FDEP local program shall:

- (a) Provide the responsible party with a Site Rehabilitation Completion Order as referenced in subsection 62-770.680(7), F.A.C., that approves the Site Rehabilitation Completion Report with the No Further Action Proposal; or
- (b) Notify the responsible party in writing, stating the reason(s) why the Site Rehabilitation Completion Report does not contain information adequate to support the opinion that cleanup objectives have been achieved. Site rehabilitation activities shall

not be deemed complete until such time as a Site Rehabilitation Completion Report with a No Further Action Proposal is approved.

(12) If the Site Rehabilitation Completion Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-770.690(10), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph 62-770.690(11)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two copies of a revised Site Rehabilitation Completion Report that addresses the deficiencies within 30 days after receipt of

the notice. If the deficiencies are not timely corrected, or cannot be corrected, the responsible party shall resume the implementation of the approved Natural Attenuation Monitoring Plan within 30 days after receipt of the notice.

(13) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

*Specific Authority 376.303, 376.3071, 403.061, 403.0877 FS. Law Implemented 376.3071, 403.0877 FS. History—New 9-23-97, Amended 8-5-99, 4-17-05*

#### **62-770.700 Active Remediation.**

(1) Within 90 days of approval of a Site Assessment Report (unless a No Further Action Proposal, a Natural Attenuation Monitoring Plan, or a recommendation to prepare a risk assessment was approved), the responsible party shall submit to the

Department or to the FDEP local program for review two copies of a Remedial Action Plan. Applicable portions of the Remedial

Action Plan shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C. The objective

of the active remediation shall be to meet the applicable No Further Action criteria of Rule 62-770.680, F.A.C., or the Natural

Attenuation Monitoring criteria of Rule 62-770.690, F.A.C. The Remedial Action Plan shall provide a design that addresses

cleanup of all soil, sediment, groundwater, or surface water found to be contaminated. If one or more of the contaminated media is

not addressed, a recommendation and justification for that decision shall be included. Additionally, if the Remedial Action Plan

addresses contamination that has migrated into any medium beyond the boundary of the source property (i.e., the location from

which the contamination is emanating), then the point of compliance may be temporarily extended beyond the property boundary

with appropriate monitoring, if such extension is needed to address the current conditions of the plume, provided human health,

public safety, and the environment are protected. If the point of compliance is proposed to be temporarily extended beyond the

property boundary, the responsible party shall identify to the Department the real property owner(s) of any property(ies) into which

the point of compliance is allowed to temporarily extend and any county or municipality having jurisdiction over the area. Prior to

the Department authorizing a temporary extension of the point of compliance beyond the property boundary, the responsible party

shall provide notice and an opportunity to comment pursuant to subsection 62-770.220(3), F.A.C.

(2) Performance of a pilot study for bioremediation, biosparging, bioventing, or any innovative technology shall be necessary

prior to designing a treatment system that will incorporate any of these technologies. A pilot study for soil vapor extraction or in

situ sparging is recommended if the suitability of the site conditions for soil vapor extraction and in situ sparging is marginal or if

the performance of a pilot study will result in a more efficient design that would outweigh the additional cost of the pilot study.

Prior to performing a pilot study, the responsible party shall submit to the Department or to the FDEP local program for review two

copies of a proposal to evaluate the applicability of the pilot study, to determine the need for any applicable Department permits or

authorizations (for example, underground injection control, National Pollutant Discharge Elimination System, or air emissions), and to ensure that human health and the environment are adequately protected. If the size of the plume and knowledge of the site's stratigraphy do not warrant performance of a pilot study for soil vapor extraction or in situ sparging, the responsible party shall submit to the Department or to the FDEP local program for review a proposal explaining the rationale for the decision to not perform a pilot study. The date for preparation and submission of the Remedial Action Plan shall be extended until the Department or the FDEP local program has notified the responsible party to proceed with the pilot study or to prepare the Remedial Action Plan without performing the pilot study.

(3) The Remedial Action Plan shall:

- (a) Include all applicable information required by subsection 62-770.400(2), F.A.C.;
- (b) Summarize the Site Assessment Report conclusions and any additional data obtained subsequent to Site Assessment Report approval;
- (c) If groundwater contamination is present, include results from a round of groundwater sampling and analyses from a number of monitoring wells adequate to determine the highest concentrations of petroleum products' contaminants of concern, to verify the horizontal and vertical extent of the plume, and to provide design data for the Remedial Action Plan. The sampling and analyses shall be performed after approval of the Site Assessment Report, unless the most recent groundwater analytical results submitted in the approved Site Assessment Report are from a round of groundwater sampling and analyses performed less than 270 days prior to submittal of the Remedial Action Plan. If the results from the confirmatory round of sampling contradict earlier results, then the applicable site assessment tasks specified in Rule 62-770.600, F.A.C., shall be performed to evaluate the current site conditions;

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- (d) Include an estimate of the total mass and mass distribution of petroleum or petroleum products in the subsurface as product entrapped above the water table, free product, and product entrapped below the water table, based on the most recent soil and groundwater analytical and field screening results. These estimates shall be revised if additional data become available that contradict or enhance the data used during the remedial design process;
- (e) Explain the rationale for the active remediation method(s) selected, that shall include at a minimum:
  1. Results from any pilot studies or bench tests; and
  2. Results of an evaluation of remedial alternatives (including source removal), and a discussion of why other remedial alternatives considered were rejected, based on the following criteria:
    - a. Long-term and short-term human health and environmental effects;
    - b. Implementability, that may include ease of construction, site access, and necessity for permits;
    - c. Operation and maintenance requirements;
    - d. Reliability;
    - e. Feasibility;
    - f. Estimated time required to achieve cleanup; and
    - g. Cost-effectiveness of installation, and operation and maintenance, when compared to other site remediation alternatives;
- (f) Include the design and construction details for the equipment to be used during active remediation;
- (g) Summarize the operational details of the equipment to be used during active remediation, including, if applicable:
  1. The disposition of any effluent;
  2. The expected concentrations of petroleum products' contaminants of concern in the effluent;
  3. The method of air emissions treatment and the expected quantities in pounds per day of any petroleum products' contaminants of concern discharged into air as a result of all the on-site active remediation systems. A separate air permit will not

be required if the mass of total petroleum hydrocarbons in the air emissions from all the on-site remediation equipment system(s) does not exceed 13.7 pounds per day. For on-site remediation equipment system(s) located at a facility that is a Title V source pursuant to Chapter 62-213, F.A.C., a separate permit pursuant to that chapter may be required;

4. The rates of application and concentrations of any in situ chemical or biological enhancement technologies implemented; and

5. The schedule for maintenance and monitoring of the remediation system;

(h) If groundwater contamination is present:

1. For remedial systems that include groundwater recovery, include a list of petroleum products' contaminants of concern to be monitored in the recovery well(s) and in the effluent from the treatment system (based on the type of treatment employed and disposition of the effluent), the designation of recovery well(s) to be sampled, and a proposal for their sampling frequency. Contaminants of concern that do not exceed the background concentrations or the applicable CTLs in samples from the recovery wells for two consecutive sampling events with a sampling frequency not less than quarterly may be excluded from subsequent monitoring events;

2. Include a list of petroleum products' contaminants of concern to be monitored, the designation of a representative number of monitoring wells and, if applicable, surface water bodies to be sampled, and a proposal for their sampling frequency adequate to monitor the cleanup progress during active remediation, and the description of the methodology proposed to evaluate the effectiveness and efficiency of the remediation system. The designated wells shall include at least one well located at the downgradient edge of the plume and one well in the area(s) of highest groundwater contamination or directly adjacent to it if the area of highest groundwater contamination is inaccessible (for example, under a structure). For cleanups expected to last greater than two years, wells shall be sampled quarterly for the first year and semiannually thereafter. For cleanups expected to last less than two years, wells shall be sampled quarterly or at an alternative frequency as proposed in the approved Remedial Action Plan;

3. Include a list of petroleum products' contaminants of concern to be monitored and the designation of a representative number of currently and previously contaminated monitoring wells that shall be sampled once a year during active remediation in order to redefine the plume and fully evaluate the effectiveness and efficiency of the remediation system; and

4. Include the designation of a representative number of monitoring wells, piezometers and, if applicable, staff gauge locations to collect water-level data each time groundwater samples are collected; and

(i) Provide the details of any proposed treatment or disposition of contaminated soil or sediment. If contaminated soil exists at the site and active remediation does not include treatment or removal of such soil, the basis for the decision to forego treatment or removal shall be provided and the Remedial Action Plan shall include a proposal to implement an institutional control, or both an institutional and an engineering control, pursuant to subsection 62-770.680(2) or 62-770.680(3), F.A.C., unless only leachability-based soil CTLs are exceeded and the site is expected to meet the criteria for Natural Attenuation Monitoring after active remediation has been implemented.

(4) The remedial action plan summary form [Form 62-770.900(4)], shall be completed and submitted as part of the Remedial Action Plan. The information provided in the remedial action plan summary form shall be updated to be consistent with the final approved Remedial Action Plan and any subsequent modifications to the approved Remedial Action Plan, and the updated

summary form shall be submitted to the Department or to the FDEP local program.

(5) Other requirements to be included in the Remedial Action Plan, if applicable, include the following:

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(a) Vacuum extraction systems shall be equipped with a means of air emissions treatment for at least the first 30 days of system

operation. Air emissions treatment may be discontinued after the first 30 days of system operation if the mass of total petroleum

hydrocarbons in the emissions from all the on-site remediation equipment system(s) does not exceed 13.7 pounds per day;

(b) Bioventing systems shall be equipped with a means of air emissions treatment unless the Remedial Action Plan design is

based on respiration rates and optimum air flow that result in soil remediation primarily by bioremediation with minimal

volatilization of hydrocarbons. This objective shall be confirmed by a pilot study or by emissions sampling during startup;

(c) In situ air sparging systems shall be designed and operated in conjunction with air emissions treatment system(s) unless the

Remedial Action Plan design is based on sparging rates and optimum air flow with minimal volatilization of hydrocarbons. This

objective shall be confirmed by emissions sampling during startup. If a vacuum extraction system is used, the vacuum extraction

system shall operate at an air flow rate at least 50% greater than the sparging air flow rate, and the vacuum extraction system shall

be provided with air emissions control as described in paragraph 62-770.700(5)(a), F.A.C.;

(d) Biosparging systems shall be equipped with a means of air emissions control unless the Remedial Action Plan design is

based on the optimum air sparging rates that promote biological activity with minimal volatilization of hydrocarbons. This

objective shall be confirmed by a pilot study or by emissions sampling during startup;

(e) Multi-phase extraction systems shall be equipped with a means of air emissions treatment for at least the first 30 days of

system operation. Air emissions treatment may be discontinued after the first 30 days of system operation if the mass of total

petroleum hydrocarbons in the emissions from all the on-site remediation equipment system(s) does not exceed 13.7 pounds per

day;

(f) A sampling schedule shall be specified for monitoring vacuum extraction systems, in situ sparging, bioremediation, or other

in situ means of remediation of soil and groundwater; and

(g) An identification shall be made of methods proposed to assess remediation effectiveness in terms of mass removal relative

to the amount of mass estimated pursuant to paragraph 62-770.700(3)(d), F.A.C.

(6) The most cost-effective and appropriate strategy for some sites may be active remediation followed by the monitoring of

natural attenuation. The active remediation may consist solely of soil remediation, short-term or intermittent groundwater

remediation, other remedial enhancements, or combinations of these. The discontinuation of active remediation may be appropriate

at any time depending on the site-specific characteristics and conditions. The Remedial Action Plan shall include a discussion of

when the active remediation will be discontinued. If the responsible party chooses to utilize the provisions of this paragraph, natural

attenuation monitoring shall be performed pursuant to subsection 62-770.690(8), F.A.C., when the Natural Attenuation Monitoring

criteria of Rule 62-770.690, F.A.C., have been met.

(7) The Remedial Action Plan may propose the use of new and innovative technologies or approaches that meet the criteria of

Rule 62-770.700, F.A.C., and that are cost-effective in meeting the No Further Action criteria of Rule 62-770.680, F.A.C., or the

Natural Attenuation Monitoring criteria of Rule 62-770.690, F.A.C. The Remedial Action Plan shall include a demonstration that

the proposed technology or approach meets the criteria of subsections 62-770.700(1)-(3), 62-770.700(5), and 62-770.700(6), F.A.C.

These technologies or approaches may include low-cost enhancements to natural attenuation. Natural attenuation monitoring shall

be suspended during the implementation of the enhancement, pursuant to subsection 62-770.690(9), F.A.C.

(8) Within 60 days of receipt of a Remedial Action Plan or of additional information pursuant to subsection 62-770.800(3),

F.A.C., the Department or the FDEP local program shall:

(a) Provide the responsible party with a Remedial Action Plan Approval Order that approves the Remedial Action Plan; or

(b) Notify the responsible party in writing, stating:

1. The reason(s) why the Remedial Action Plan does not contain information adequate to support the conclusion that the active

remediation will be cost-effective and will comply with all applicable requirements of Rule 62-770.700, F.A.C.; or

2. The reason(s) why the proposal, plan, or recommendation included in the Remedial Action Plan is not supported by the

applicable criteria.

(9) If the Remedial Action Plan is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-770.700(3), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph

62-770.700(8)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two

copies of a Remedial Action Plan Addendum that addresses the deficiencies within 60 days after receipt of the notice.

(10) Active remediation activities shall not be implemented until the Remedial Action Plan is approved. Prior to implementation of the Remedial Action Plan, the responsible party shall obtain all applicable Department permits or authorizations

required for site rehabilitation activities (for example, separate permits for underground injection control, National Pollutant

Discharge Elimination System, or air emissions), if not included in the Remedial Action Plan approval. Responsible parties are

advised that other federal or local laws and regulations may apply to these activities.

(11) Within 120 days of approval of the Remedial Action Plan, unless a modification is obtained pursuant to the provisions of

subsection 62-770.800(4), F.A.C., the operation of the active remediation system(s) shall be initiated unless, after the exercise of

reasonable diligence, applicable permits required pursuant to subsection 62-770.700(10), F.A.C., have not been obtained. The

following shall be obtained or determined during active remediation at the specified frequencies and turnaround times, as

applicable, unless otherwise provided in the approved Remedial Action Plan:

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(a) Water-level data collected from all designated wells, piezometers, and staff gauge locations each time monitoring wells and

recovery wells are sampled (water-level measurements shall be made within a 24-hour period). If water-level data or operational

parameters remain unchanged, the responsible party may propose, pursuant to paragraph 62-770.700(15)(b), F.A.C., that the

requirement be modified or discontinued;

(b) Total volume of free product recovered and the thickness and horizontal extent of free product during the reporting period

until product recovery is completed;

(c) Total volume of groundwater recovered from each recovery well during each month of the operating period for the first

year, and quarterly thereafter or at an alternative frequency as proposed in the approved Remedial Action Plan;

(d) Concentrations of applicable petroleum products' contaminants of concern based on analyses performed on the effluent

from the groundwater treatment system, daily for the first three days with a 24 hour turnaround on analytical results of the samples

collected the first two days, weekly for the next three weeks, monthly for the next two months, and quarterly thereafter or at an

alternative frequency as proposed in the approved Remedial Action Plan;

(e) Concentrations of applicable petroleum products' contaminants of concern based on analyses performed on the untreated groundwater from the selected individual recovery well(s), as proposed in the approved Remedial Action Plan, daily for the first three days, monthly for the next two months, and quarterly thereafter or at an alternative frequency as proposed in the approved Remedial Action Plan. Sampling of groundwater from individual multi-phase extraction wells to evaluate the performance of the recovery and treatment system shall be performed as necessary, as approved in the Remedial Action Plan;

(f) Analytical data from all monitoring wells sampled during the remediation year to monitor rehabilitation progress during active remediation, including all applicable information required by subsection 62-770.400(2), F.A.C.;

(g) Operational parameters for in situ sparging system(s), including measurements of groundwater mounding, dissolved oxygen, or other means (biological, chemical, or physical indicators) that will verify radius of influence at representative monitoring locations, weekly for the first month, monthly for the next two months, and quarterly thereafter. If a demonstration is provided to the Department or to the FDEP local program that operational parameters remain unchanged, the responsible party may propose, pursuant to paragraph 62-770.700(15)(b), F.A.C., that the monitoring be modified or discontinued;

(h) Operational parameters for bioremediation system(s), including measurements of dissolved oxygen at representative monitoring locations, rates of biological, chemical, or nutrient enhancement additions, and any other indicators of biological activity as proposed in the approved Remedial Action Plan, weekly for the first month, monthly for the next two months, and quarterly thereafter or at an alternative frequency as proposed in the approved Remedial Action Plan. If a demonstration is provided to the Department or to the FDEP local program that operational parameters remain unchanged, the responsible party may propose, pursuant to paragraph 62-770.700(15)(b), F.A.C., that the monitoring be modified or discontinued;

(i) Concentrations of recovered vapors from a vacuum extraction system, and post-treatment air emissions if air treatment is provided, weekly for the first month, monthly for the next two months, and quarterly thereafter (if applicable air quality standards are not exceeded for two consecutive monthly or quarterly sampling events the responsible party may submit to the Department or to the FDEP local program a proposal for a different sampling frequency; for activated carbon off-gas treatment, additional sampling events may be performed based on the estimated time of breakthrough), as follows:

1. Concentrations of recovered vapors from individual wells shall be determined using an organic vapor analyzer with a flame ionization detector, or other applicable field detection device, in order to optimize the air flow rate and hydrocarbon recovery;
2. The influent and effluent samples shall be analyzed for volatile organic aromatic hydrocarbons using a gas chromatograph equipped with a photo ionization detector for the analysis of gas, or adsorption tube samples. The protocols shall follow the analytical protocols specified in 40 CFR Part 60, Appendix A, Method 18, Section 7;
3. The samples shall be collected using protocols outlined in 40 CFR Part 60, Appendix A, Method 18, Section 7.1, Section 7.4, or Method 0030/5040 of the Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW 846, 3rd Edition;
4. All tedlar™ bag samples shall be analyzed within 72 hours of collection;
5. All mylar™ bag samples shall be analyzed within 24 hours of collection; and
6. All adsorption tube samples shall be analyzed within 72 hours of collection;

(j) Percentage of system operation time and the treatment efficiency for all operating treatment systems, including the dates

when the site was visited and whether the system was operating upon arrival at the site and upon departure from the site; and

(k) Results of analyses of soil samples taken to verify that the applicable No Further Action criteria of Rule 62-770.680,

F.A.C., or the applicable Natural Attenuation Monitoring criteria of Rule 62-770.690, F.A.C., have been met, based on one of the following:

1. When both field screening and laboratory results using the most sensitive method for the constituent(s) being analyzed for vacuum extraction systems indicate no detectable concentrations of contaminants of concern in the recovered vapors;
2. When the screening for bioventing parameters indicates that the bioventing is complete; or
3. If alternative soil CTLs were established pursuant to Rule 62-770.650, F.A.C., when system performance or monitoring using the applicable analytical methods for the appropriate constituents indicate that the alternative soil CTLs have been achieved.

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(12) Within 120 days of initiating operation of the active remediation system(s), the responsible party shall submit to the

Department or to the FDEP local program two copies of engineering drawings ("as-built" drawings). The engineering drawings shall include all construction and equipment design specifications of the installed active remediation system(s) and any operational parameters different from those in the approved Remedial Action Plan. A summary of the system(s) startup activities shall be attached to the engineering drawings.

(13) During implementation of the Remedial Action Plan, the responsible party shall submit to the Department or to the FDEP

local program for review two copies of status reports of remedial action, annually unless a greater frequency is specified in the approved Remedial Action Plan. The status reports shall be submitted within 60 days after the anniversary date of initiating

operation of the active remediation system(s) and shall contain the following, as applicable:

- (a) A summary of the data requested in paragraphs 62-770.700(11)(a)-(k), F.A.C.;
- (b) All applicable information required by subsection 62-770.400(2), F.A.C.;
- (c) A summary of the estimated mass of petroleum hydrocarbons recovered in all phases, including free product, dissolved, and vapor phases, by all the on-site remediation equipment, and a comparison to the original estimate of mass of petroleum products' contaminants of concern on-site;
- (d) One or more scaled site maps that show groundwater flow direction(s) and the current degree and extent of the contamination;
- (e) Conclusions as to the effectiveness of the active remediation for the specified period covered in the status report;
- (f) Recommendations to continue or discontinue the operation of the treatment system(s) or to modify the site rehabilitation;

and

- (g) Form 62-770.900(5), summarizing the information from the annual remedial action tasks.

(14) If effluent concentrations or air emissions exceed those in the approved Remedial Action Plan, or plume migration occurs during remediation system startup or during operation of the treatment system(s), the responsible party shall take corrective actions

and shall notify the Department or the FDEP local program within seven days. If the condition may represent an imminent threat to

human health, public safety, or the environment, the Department or the FDEP local program shall be notified within 24 hours.

Details of all such incidents shall be included in the annual status report described in subsection 62-770.700(13), F.A.C.

(15) During implementation of the Remedial Action Plan, the responsible party may propose and justify:

- (a) Supplemental assessment to determine alternative CTLs pursuant to Rule 62-770.650, F.A.C.;
- (b) Modifications to existing treatment or recovery system(s), or modifications or discontinuation of monitoring of operational



parameters, as outlined in the remedial action status report prepared pursuant to subsection 62-770.700(13), F.A.C.;  
(c) Innovative technologies pursuant to subsection 62-770.700(7), F.A.C., or other alternative technologies or approaches; or

(d) Discontinuation of active remediation and commencement of Natural Attenuation Monitoring. The proposal shall include a

Natural Attenuation Monitoring Plan pursuant to subsection 62-770.690(4), F.A.C.

(16) Within 60 days of receipt of a proposal pursuant to subsection 62-770.700(15), F.A.C., the Department or the FDEP local

program shall:

(a) Provide the responsible party with written approval of the proposal; or

(b) Notify the responsible party in writing, stating the reason(s) why the proposal does not contain information adequate to

comply with applicable requirements of subsection 62-770.700(15), F.A.C.

(17) If the proposal is incomplete in any respect, or is insufficient to satisfy the applicable requirements of subsection

62-770.700(15), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph

62-770.700(16)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two

copies of a revised Natural Attenuation Monitoring proposal or other proposal identified in paragraphs 62-770.700(15)(a)-(c),

F.A.C., that addresses the deficiencies, within 60 days after receipt of the notice. If the deficiencies are not timely corrected, or

cannot be corrected, the responsible party shall continue the implementation of the approved Remedial Action Plan.

(18) Active remediation shall be deemed complete when the No Further Action criteria of subsection 62-770.680(1), 62-770.680(2), or 62-770.680(3), F.A.C., have been met, or may be deemed complete when the Natural Attenuation Monitoring

criteria of Rule 62-770.690, F.A.C., have been met.

(19) For sites conducting active groundwater remediation, if the site does not meet the No Further Action criteria of subsection

62-770.680(1), F.A.C., or the Natural Attenuation Monitoring criteria of Rule 62-770.690, F.A.C., the responsible party may submit

to the Department or to the FDEP local program for review two copies of a proposal to discontinue active groundwater remediation,

provided the following demonstration and analyses are met:

(a) Contaminated soil has been properly removed and disposed, or treated in situ, so that the applicable soil CTLs are met or

addressed by the enactment and implementation of institutional controls or both institutional and engineering controls.

(b) After a minimum of one year of groundwater treatment, concentrations of petroleum products' contaminants of concern in

designated monitoring wells and recovery wells have leveled off. This demonstration shall be based on subsequent monthly

sampling results obtained for a minimum of 180 days, unless an alternative frequency has been approved in the Remedial Action

Plan or pursuant to subsection 62-770.700(15), F.A.C. "Leveling off" shall mean that the graph of Total Volatile Organic Aromatics

versus time generally fits a curve defined by the equation  $C = C_f + C_o e^{-kt}$ , that the lower limb of the curve is substantially linear,

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and that the slope of the final portion of the curve approaches zero. If the petroleum contamination does not contain a representative

amount of Total Volatile Organic Aromatics, then an alternative petroleum products' contaminant of concern shall be designated for

application to the curve. Applicable statistical methods shall be applied to demonstrate this conclusion.

1. In the preceding equation, symbols are defined as follows:

a. C: Concentration of the applicable petroleum products' contaminant of concern at time t;

b.  $C_f$ : Coefficient representing final concentration that the curve approaches asymptotically;

c.  $C_o$ : Coefficient representing concentration difference between the final concentration and the concentration at time zero;

d. e: 2.718, the base of natural logarithms;

e. k: Coefficient representing the exponential factor that indicates how fast the concentration approaches Cf;  
f. t: Time in days from some fixed starting point.

2. The one year minimum treatment period may be shortened if, based on the criteria of Section 376.3071, F.S., it is demonstrated to the Department or to the FDEP local program that a shorter time period is appropriate.

(c) An analysis or demonstration has been made of:

1. The technical feasibility of enhancements to the existing remediation system;
2. The technical feasibility of other proven groundwater or soil treatment techniques to further reduce the concentrations of applicable petroleum products' contaminants of concern at the site;
3. The costs and time frames involved to further reduce the concentrations of applicable petroleum products' contaminants of concern employing the alternative method(s) proposed;
4. The effects on the designated or potential use of the water resource if petroleum products' contaminants of concern remain at existing concentrations;
5. The effect on, and any protection that may be required of, surface water resources;
6. The effect on human health, public safety, and the environment if petroleum products' contaminants of concern remain at existing concentrations;
7. The extent and potential for further migration of contaminated groundwater above background concentrations or applicable CTLs; and
8. Institutional controls or both institutional and engineering controls that may be necessary to ensure protection of the public and the environment from future use of contaminated groundwater.

(d) Post active remediation monitoring shall validate the assumptions justifying the leveling off determination. If the justification for site rehabilitation is not validated during post active remediation monitoring, then the additional assessment or remediation described in Rule 62-770.700, F.A.C., may be required.

(20) If a demonstration pursuant to subsection 62-770.700(19), F.A.C., was completed, the responsible party shall compile the results of the demonstration and analyses described in paragraphs 62-770.700(19)(a)-(c), F.A.C., in a report and shall submit two copies of the report to the Department or to the FDEP local program for review. The Department or the FDEP local program shall determine, using the criteria specified in paragraph 62-770.700(19)(c), F.A.C., whether modifications to the Remedial Action Plan are required pursuant to subsection 62-770.700(15), F.A.C., to effect further treatment; however, if alternative methods are not required, active remediation shall be deemed complete.

(21) When the No Further Action criteria of subsection 62-770.680(1), F.A.C., or the leveling off criteria of subsection 62-770.700(19), F.A.C., have been met, the responsible party shall submit to the Department or to the FDEP local program for review two copies of a Post Active Remediation Monitoring Plan prepared pursuant to the Post Active Remediation Monitoring criteria described in Rule 62-770.750, F.A.C. (unless the Department or the FDEP local program has concurred that groundwater sampling is unnecessary based on the site-specific conditions). If the Department or the FDEP local program agrees that groundwater sampling is unnecessary and the site meets the No Further Action criteria of subsection 62-770.680(1), F.A.C., a Site Rehabilitation Completion Order shall be issued as referenced in subsection 62-770.680(7), F.A.C.

*Specific Authority 376.303, 376.3071, 403.0877 FS. Law Implemented 376.3071, 403.0877 FS. History- New 11-1-87, Amended 2-4-88, Formerly 17-70.010, Amended 2-21-90, Formerly 17-770.700, Amended 9-3-96, 9-23-97, 8-5-99, 4-17-05.*

**62-770.750 Post Active Remediation Monitoring.**

(1) Groundwater monitoring shall be performed following the completion of active groundwater remediation or soil remediation as described in Rule 62-770.700, F.A.C., unless the Department or the FDEP local program has concurred that

groundwater sampling is unnecessary based on the site-specific conditions. When active groundwater remediation has met the No Further Action criteria of subsection 62-770.680(1), F.A.C., or the leveling off criteria of subsection 62-770.700(19), F.A.C., the responsible party shall submit to the Department or to the FDEP local program for review two copies of a Post Active Remediation Monitoring Plan prepared pursuant to subsection 62-770.750(5), F.A.C., and including analytical results demonstrating this conclusion.

(2) Applicable portions of the Post Active Remediation Monitoring Plan shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C.

(3) Within 60 days of receipt of a Post Active Remediation Monitoring Plan or of additional information pursuant to subsection 62-770.800(3), F.A.C., the Department or the FDEP local program shall:

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(a) Provide the responsible party with written approval of the Post Active Remediation Monitoring Plan; or  
(b) Notify the responsible party in writing, stating the reason(s) why the Post Active Remediation Monitoring Plan does not

contain information adequate to support the conclusion that the applicable Post Active Remediation Monitoring criteria of Rule 62-770.750, F.A.C., have been met.

(4) If the Post Active Remediation Monitoring Plan is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-770.750(1), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph 62-770.750(3)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for

review two copies of a revised Post Active Remediation Monitoring Plan that addresses the deficiencies within 30 days after receipt

of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the responsible party shall resume the implementation of the approved Remedial Action Plan within 30 days after receipt of the notice.

(5) The monitoring program shall be performed as specified in the Post Active Remediation Monitoring Plan approval, as follows:

(a) A minimum of two monitoring wells is required:

1. At least one well shall be located at the downgradient edge of the plume; and
2. At least one well shall be located in the area(s) of highest groundwater contamination or directly adjacent to it if the area of highest groundwater contamination is inaccessible (for example, under a structure);

(b) The designated monitoring wells shall be sampled quarterly for analyses of applicable petroleum products' contaminants of

concern that were present prior to the initiation of active remediation;

(c) Water-level measurements in all designated wells and piezometers shall be made within 24 hours of initiating each sampling event;

(d) Within 60 days of sample collection, the responsible party shall submit to the Department or to the FDEP local program for

review two copies of a Post Active Remediation Monitoring Report. The report shall include the analytical results (laboratory

report), chain of custody record form [Form 62-770.900(2) or an equivalent chain of custody form that includes all the items

required by Form 62-770.900(2)], the tables required pursuant to subparagraph 62-770.600(8)(a)25., F.A.C., updated as applicable,

site maps that illustrate the analytical results, and the water-level elevation information (summary table and flow map);

(e) If analyses of groundwater samples indicate that concentrations of applicable petroleum products' contaminants of concern

exceed any action levels specified in the Post Active Remediation Monitoring Plan approval, the well or wells shall be resampled

no later than 30 days after the initial positive result is known. If the results of the resampling confirm that the applicable action levels are exceeded, then the monitoring report referenced in paragraph 62-770.750(5)(d), F.A.C., shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C., and shall include a proposal to:

1. Perform a supplemental site assessment and submit a supplemental Site Assessment Report pursuant to Rule 62-770.600, F.A.C.;
2. Continue the implementation of the approved Post Active Remediation Monitoring Plan; or
3. Implement additional active remediation pursuant to Rule 62-770.700, F.A.C.; and

(f) A minimum of four groundwater sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-770.680(1), 62-770.680(2), or 62-770.680(3), F.A.C., have been met for at least the last two quarterly or semiannual sampling events. However, if contamination was only present in the unsaturated zone during the site assessment and active remediation tasks, site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-770.680(1), 62-770.680(2), or 62-770.680(3), F.A.C., are met during only one sampling event.

(6) The remediation equipment shall be maintained in an inactive but operational status during the duration of post active remediation monitoring to avoid the possibility of having to re-install it if concentrations of petroleum products' contaminants of concern rebound.

(7) When post active remediation monitoring is considered complete pursuant to paragraph 62-770.750(5)(f), F.A.C., the responsible party shall submit to the Department or to the FDEP local program for review two copies of a Site Rehabilitation Completion Report with a No Further Action Proposal. Applicable portions of the Site Rehabilitation Completion Report shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-770.490, F.A.C. The Site Rehabilitation Completion Report shall include the documentation required in paragraph 62-770.750(5)(d), F.A.C., to support the opinion that site cleanup objectives have been achieved.

(8) Within 60 days of receipt of a Site Rehabilitation Completion Report or of additional information pursuant to subsection 62-770.800(3), F.A.C., the Department or the FDEP local program shall:

- (a) Provide the responsible party with a Site Rehabilitation Completion Order as referenced in subsection 62-770.680(7), F.A.C., that approves the Site Rehabilitation Completion Report with the No Further Action Proposal; or
- (b) Notify the responsible party in writing, stating the reason(s) why the Site Rehabilitation Completion Report does not contain information adequate to support the opinion that the cleanup objectives have been achieved. Site rehabilitation activities shall not be deemed complete until such time as a Site Rehabilitation Completion Report with a No Further Action Proposal is approved.

(9) If the Site Rehabilitation Completion Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-770.750(7), F.A.C., the Department or the FDEP local program shall inform the responsible party pursuant to paragraph 62-770.750(8)(b), F.A.C., and the responsible party shall submit to the Department or to the FDEP local program for review two copies of a revised Site Rehabilitation Completion Report that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the responsible party shall resume the implementation of the approved Post Active Remediation Monitoring Plan within 30 days after receipt of the notice.

(10) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

*Specific Authority 376.303, 376.3071, 403.061, 403.0877 FS. Law Implemented 376.3071, 403.0877 FS. History- New 9-23-97, Amended 8-5-99, 4-17-05.*

**62-770.800 Time Schedules.**

- (1) For site rehabilitation being performed at petroleum contamination sites eligible for State funded assistance under the Inland Protection Trust Fund, the time frames specified in this chapter do not apply.
- (2) If the responsible party has entered into a Consent Order with the Department for site rehabilitation, the time frames and any alternative CTLs set forth in the Consent Order shall take precedence over the time frames and CTLs set forth in this chapter.
- (3) Within 60 days of receipt of a written notification from the Department or from the FDEP local program that a plan or report does not contain adequate information or that the information provided is not supported by the applicable criteria, the responsible party shall submit the requested information to the Department or to the FDEP local program.
- (4) A modification of the time frame may be obtained by the responsible party for any action set forth in this chapter for good cause shown by requesting in writing that the Department or the FDEP local program make such a modification. The request shall specify which time frame(s) is to be modified and the amount of additional time required, and shall provide documentation supporting the good cause for the request. The request shall be received by the Department or by the FDEP local program at least 20 days prior to the time the action is to be initiated. If emergency situations at a site do not allow for the full 20 days notice, the request shall detail such emergency situation. Within 20 days of receipt of a request for modification, the Department or the FDEP local program shall notify the responsible party in writing if additional information regarding the request is needed. Within 20 days of receipt of the request or of the additional information, the Department or the FDEP local program shall notify the responsible party in writing as to whether modification of the time frame(s) will be allowed. For purposes of this subsection, good cause shall mean unanticipated events outside the control of the responsible party. Applicable deadlines pursuant to this chapter shall be tolled while a request for modification of a time frame is pending.
- (5) The failure of the responsible party to submit requested information or meet any time frame herein shall be a violation of Chapters 376 and 403, F.S., and shall be enforceable by the Department pursuant to Sections 376.303 and 403.121, F.S.
- (6) In no circumstances shall the Department's or the FDEP local program's failure to meet any time frame herein be construed as approval of any plan or action by the Department or by the FDEP local program.

*Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071, 376.30711 FS. History New 11-1-87, Formerly 17-70.013, Amended*

*2-21-90, Formerly 17-770.800, Amended 9-23-97, 8-5-99, 4-17-05*

**62-770.890 Alternative Procedures and Requirements.**

- (1) Any person subject to the provisions of this chapter may request in writing a determination by the Secretary or the Secretary's designee that any requirement of this chapter shall not apply to actions to be undertaken at a site, and shall request approval of alternative procedures or requirements.
- (2) The request shall set forth at a minimum the following information:
  - (a) The specific site for which an exception is sought;
  - (b) The specific provision(s) of Chapter 62-770, F.A.C., from which an exception is sought;
  - (c) The basis for the exception;
  - (d) The alternative procedure or requirement for which approval is sought;
  - (e) Documentation that demonstrates that the alternative procedure or requirement provides an equivalent or greater degree of protection for the lands, surface waters, or groundwaters of the State as the established requirement; and

(f) Documentation that demonstrates that the alternative procedure or requirement is at least as effective as the established procedure or requirement.

(3) Within 60 days of receipt of a request for approval of an alternative procedure, the Department shall issue an Order:

(a) Approving the request; or

(b) Notifying the responsible party, stating the reason(s) why the request does not make an adequate demonstration that the requirements of subsection 62-770.890(2), F.A.C., have been met.

(4) The Department's Order shall be agency action, reviewable pursuant to Sections 120.569 and 120.57, F.S.

(5) The provisions of this rule do not preclude the use of any other applicable relief provisions.

*Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071 FS. History—New 11-1-87, Formerly 17-70.016, Amended 2-21-90,*

*Formerly 17-770.890, Amended 9-23-97, 8-5-99, 4-17-05*

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#### **62-770.900 Forms.**

The forms used by the Department or by the FDEP local program in the Petroleum Contamination Cleanup Program are adopted

and incorporated by reference in this rule. Each form is listed by rule number, which is also the form number, and with the subject,

title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Bureau of

Petroleum Storage Systems, MS 4575, 2600 Blair Stone Road, Tallahassee, FL 32399-2400.

(1) Form 62-770.900(1), Free Product Removal Notification Form for Petroleum or Petroleum Products (effective April 17, 2005).

(2) Form 62-770.900(2), Chain of Custody Record (effective April 17, 2005).

(3) Form 62-770.900(3), Initial Notice of Contamination Beyond Property Boundaries (effective April 17, 2005).

(4) Form 62-770.900(4), Remedial Action Plan Summary (effective September 23, 1997).

(5) Form 62-770.900(5), Active Remediation Annual Status Report Summary (effective September 23, 1997).

*Specific Authority 376.303, 376.3071 FS. Law Implemented 376.3071 FS. History—New 2-21-90, Formerly 17-770.900, Amended 9-23-97,*

*8-5-99, 4-17-05*

#### **TABLE A**

Petroleum Products' Contaminants of Concern

Acenaphthene

Acenaphthylene

Anthracene

Arsenic

Benzene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Cadmium

Chloride

Chromium

Chrysene

Dibenz(a,h)anthracene

Dibromoethane, 1,2- (EDB)

Dichloroethane, 1,2-

Ethylbenzene

Fluoranthene

Fluorene

Indeno(1,2,3-cd)pyrene

Lead

Methyl tert-butyl ether (MTBE)

Methylnaphthalene, 1-

Methylnaphthalene, 2-

Naphthalene

Phenanthrene

Pyrene

Sulfate

- 981

Toluene

Total Dissolved Solids (TDS)

TRPHs

Xylenes, total

- 982

#### TABLE B

For Gasoline and Kerosene Analytical Groups

Contaminants of Concern Groundwater and Surface Water Soil and Sediment

Benzene, Ethylbenzene, Toluene, total Xylenes, and MTBE 602, 624, 8021, or 8260 8021 or 8260

1-methylnaphthalene, 2-methylnaphthalene, and the 16

method-listed PAHs included in Table A

610, 625, 8100, 8270, or 8310 8100, 8270, or 8310

1,2-dichloroethane and other listed Priority Pollutant Volatile

Organic Halocarbons

601, 624, 8021, or 8260 NOT REQUIRED

1,2-dibromoethane (EDB) 601 with electron capture detector

substituted for electrolytic conductivity

detector and 2-column confirmation, or 504

or 8011

NOT REQUIRED

Total Lead 200.7, 200.8, 200.9, 239.2, 6010, 6020, or

7421

NOT REQUIRED

TRPHs FL-PRO FL-PRO

NOTE 1: All methods listed (except for FL-PRO) are USHPA methods and the detection limits shall meet the specified cleanup target levels.

NOTE 2: Appropriate sample preparation and cleanup methods (e.g., extraction, digestion) shall be performed prior to analysis.

NOTE 3: Equivalent methods may be used if approved through protocols described in Chapter 62-160, F.A.C

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#### TABLE C

**For used oil, for identified products not listed in the Gasoline or Kerosene**

**Analytical Groups, and for products for which the specific identity is unknown**

Contaminants of Concern Groundwater and Surface Water Soil and Sediment

Total Arsenic 200.7, 200.8, 200.9, 206.2, 206.3, 6010,

6020, 7060, or 7061

6010, 6020, 7060, or

7061

Total Cadmium [for groundwater, and Class II and Class

III (marine) surface water] 200.7, 200.8,

200.9, 213.1, 213.2, 6010, 6020, 7130, or

7131

[for Class I and Class III (fresh) surface

water] 213.2 or 7131

6010, 6020, 7130, or

7131

Total Chromium 200.7, 200.8, 200.9, 218.2, 6010, 6020,

or 7191

6010, 6020, 7190, or

7191

Total Lead 200.7, 200.8, 200.9, 239.2, 6010, 6020,

or 7421

6010, 6020, or 7421

Priority Pollutant Volatile Organics 624 or 8260 8260

Priority Pollutant Extractable Organics 625 or 8270 8270

Non-priority Pollutant Organics (with GC/MS

peaks greater than 10 ug/L)

624 or 8260, and 625 or 8270 NOT REQUIRED

Priority Pollutant Volatile Organic

Halocarbons

601, 624, 8021, or 8260 8021 or 8260

1-methylnaphthalene, 2-methylnaphthalene,

and the 16 method-listed PAHs included in

Table A

610, 625, 8100, 8270, or 8310 8100, 8270, or 8310

Polychlorinated Biphenyls 8082 or 8270 8082 or 8270

TRPHs FL-PRO FL-PRO

Toxicity Characteristic Leaching Procedure (TCLP) and the subsequent analyses for metals shall be performed on soil samples to

determine if the soil is a hazardous waste and to evaluate leaching potential when the total concentration of any contaminant of

concern in the samples meets the following conditions (the applicable analytical method shall be used following sample

preparation by USEPA Method 1311 and any appropriate digestion procedure):

If: Exceeds: Use: Test Criteria:

Total Arsenic 100 mg/kg 6010, 6020, 7060, or 7061

5.0 mg/L

Total Cadmium 20 mg/kg 6010, 6020, 7130, or 7131

1.0 mg/L

Total Chromium 100 mg/kg 6010, 6020, or 7191 5.0 mg/L

Total Lead 100 mg/kg 7421 5.0 mg/L

NOTE 1: All methods listed (except for FL-PRO) are USEPA methods and the detection limits shall meet the specified cleanup target levels.

NOTE 2: Appropriate sample preparation and cleanup methods (e.g., extraction, digestion) shall be performed prior to analysis.

NOTE 3: Equivalent methods may be used if approved through protocols described in Chapter 62-160, F.A.C.

- 984

#### TABLE D

For petroleum as defined in Section 376.301, F.S.

Contaminants of Concern Groundwater and Surface Water Soil and Sediment

Benzene, Ethylbenzene, Toluene, total

Xylenes, and MTBE

602, 624, 8021, or 8260 8021 or 8260

1-methylnaphthalene,

2-methylnaphthalene, and the 16

method-listed PAHs included in Table

A

610, 625, 8100, 8270, or 8310 8100, 8270, or 8310

1,2-dichloroethane and other listed

Priority Pollutant Volatile Organic

Halocarbons

601, 624, 8021, or 8260 8021 or 8260

1,2-dibromoethane (EDB) 601 with electron capture detector substituted for electrolytic conductivity detector and 2-column

confirmation, or 504 or 8011

NOT REQUIRED

Total Arsenic 200.7, 200.8, 200.9, 206.2, 206.3, 6010, 6020, 7060, or 7061

6010, 6020, 7060, or 7061

Total Cadmium [for groundwater, and Class II and Class III (marine) surface water] 200.7, 200.8, 200.9, 213.1, 213.2,

6010, 6020, 7130, or 7131

[for Class I and Class III (fresh) surface water]

213.2 or 7131

6010, 6020, 7130, or 7131

Total Chromium 200.7, 200.8, 200.9, 218.2, 6010, 6020, or 7191 6010, 6020, 7190, or 7191

Total Lead 200.7, 200.8, 200.9, 239.2, 6010, 6020, or 7421 6010, 6020, or 7421

IRPHs FL-PRO FL-PRO

Chloride 300.0, 325.1, 325.2, 325.3, 9056, 9250, 9251, or 9253

NOT REQUIRED

Sulfate

375.1, 375.3, 375.4, 9035, 9038, or 9056 NOT REQUIRED

Total Dissolved Solids (TDS) 160.1 NOT APPLICABLE

NOTE 1. All methods listed (except for FL-PRO) are USEPA methods and the detection limits shall meet the specified cleanup target levels.



NOTE 2: Appropriate sample preparation and cleanup methods (e.g., extraction, digestion) shall be performed prior to analysis.

NOTE 3: Equivalent methods may be used if approved through protocols described in Chapter 62-160, F.A.C.

EXHIBIT "B"

## Task One

### Pre-Remediation Activities and Source Removal

TASKS	Estimated # Work hours	Estimated Quantity	Unit	Unit price	Total Item amount
A. Prepare Draft Source Removal Plan	10			65.00	650.00
B. Initial Meeting with EPD	3			65.00	195.00
C. Application to Davie for Site Dev. Permit	3			65.00	195.00
D. Site Security to include temporary chain link fence with wind screen around perimeter of open excavation, if needed			Site Security	2000.00	2000.00
E. Source Removal, Transportation, Disposal*		1,011 tons	Ton	50.00	50550.00
F. Dewatering of Excavation, with applicable permits and testing			Dewatering Event	8,000.00	8000.00
G. Soil Sampling		2 samples	Sample	400.00	800.00
H. Laboratory Analysis		2 samples	Sample	425.00	850.00
I. Prepare and Submit to EPD Form 62-770.900(1)	1			65.00	65.00
J. Prepare and Submit to EPD Interim Source Removal Report	5			65.00	325.00
TASK ONE TOTAL:					63,680.00

\*Please price concrete removal and disposal up to 8" thick; if thicker, a change order will be issued.

08/14/2007 15:45 9547971200

DAVIE CRA

**Task Three**  
**Active Remediation**

TASKS	Estimated # Work Hours	Estimated Quantity	Unit	Unit Price	Total Item amount
A. Meeting with EPD	2			65.00	130.00
B. Prepare Remedial Action Plan for Review and Approval	30			65.00	1950.00
C. Submit Application to Construct/Operate Air Pollution Source to EPD (if applicable)	10			65.00	650.00
D. Submit Application to Davie for Construction of a Remedial System	8			65.00	520.00
E. Aeration or Other Remediation Methodology approved by BCEPD		1 day	Day	2500.00	2500.00
F. Soil Sampling		2 samples	Sample	100.00	200.00
G. Laboratory Analysis		2 samples	Sample	400.00	800.00
H. Prepare and Submit Engineering Drawings	8			65.00	520.00
I. Prepare and Submit Status Reports	20			65.00	1300.00
TASK THREE TOTAL:					8670.00

**Task Four**  
**Post Active Remediation Monitoring**

TASKS	Estimated # Work Hours	Estimated Quantity	Unit	Unit Price	Total Item amount
A. Prepare and Submit Post Active Remediation Monitoring Plan	15			65.00	975.00
B. Groundwater Sampling		8 samples	Sample	100.00	800.00
C. Laboratory Analysis		8 samples	Sample	400.00	3200.00
D. Prepare and Submit Post Active Remediation Monitoring Report	12			65.00	1170.00
E. Prepare and Submit Annual Status Report Documenting Progress	8			65.00	520.00
F. Prepare and Submit Site Rehabilitation Completion Report with NFA Proposal	8			65.00	520.00
			TASK FOUR TOTAL:		7185.00

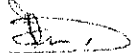
TASK ONE TOTAL	63,630.00
TASK TWO TOTAL	14,631.50
TASK THREE TOTAL	8,570.00
TASK ONE, TWO, AND THREE SUBTOTAL	86,831.50
TASK FOUR TOTAL	7,185.00
TASKS 1-4 TOTAL	94,016.50

TOTAL BASE BID in words:

Ninety Four Thousand Sixteen dollars and fifty cents.TOTAL BASE BID in numbers: 94,016.50COMPANY: Geotech Environmental, LLCADDRESS: 7737 N. UNIVERSITY DRIVE, SUITE 206  
TAHARAC, FLORIDA 33321PHONE: 954 - 597 9100FAX: 954 - 597 9191NAME: NILESH LAKHLANISIGNATURE: Will your firm accept payment from the Town's procurement card? Circle one: ☒ YES ☐ NO

## EXHIBIT "C"

Company: GEOTECH ENVIRONMENTAL, INC

Signature: 

8/3/2007

Please input your time estimates into the shaded boxes.

<b>1.a. Pre-Remediation Activities</b>	
Meet with EPD/ Application To Davie	15 Days
<b>1.b. Source Removal</b>	
Source Removal/Sampling	45 Days
EPD review	60 days
<b>2. Site Assessment</b>	
Site Assessment Report	45 days
EPD review	60 days
<b>3. Active Remediation</b>	
Remedial Action Plan	30 days
EPD Review	60 days
Remediation	30 days
<b>Tasks 1-3 Total:</b>	<b>345 days</b>
<b>4. Post Active Remediation</b>	
Remediation Plan	21 days
EPD Review	60 days
Post Active Remediation	365 days
Completion Report	
EPD Review	60 days
<b>Task 4 Total:</b>	<b>506 days</b>



Calvin, Giordano & Associates, Inc.  
EXCEPTIONAL SOLUTIONS

August 3, 2007

Mr. Will Allen  
Redevelopment Administrator  
Town of Davie, Community Redevelopment Agency  
4700 Davie Road, Suite C  
Davie, FL 33314

RE: Town of Davie CRA Site Remediation  
CGA Project No. 06-5789

Dear Mr. Allen:

I have reviewed the five bids that were received for the Site Remediation-CRA Property, B-07-107 on July 24, 2007. Based on the bids received, the lowest responsible bidder is GeoTech Environmental, Inc. The second lowest responsible bidder is Access Group, Inc. Please see attached Cost Breakdown for the bid amounts.

GeoTech Environmental, Inc. has staff experience in remediation, appropriate licenses, and project experience similar to this project. I have contacted the three companies that GeoTech listed under "Item 13 Supplement: Similar Projects Last Five Years" and each contact person spoke favorably of GeoTech's work performance. GeoTech has complied with the requirements of the bid specifications and has completed the four task forms in their entirety. In addition, their schedule estimates are reasonable.

Please feel free to contact me if you have any questions.

Sincerely,

Lisa W. Maack  
Environmental Planner

Engineering  
Construction Engineering  
Inspection  
Municipal Engineering  
Transportation Planning  
Traffic Engineering  
Surveying & Mapping  
Planning  
Landscape Architecture  
Environmental Services  
Instruction Services  
Indoor Air Quality  
Data Technologies  
Development

600 Eller Drive, Suite 600  
Fort Lauderdale, FL 33316  
Phone: 954.921.7781  
Fax: 954.921.8807  
www.calvin-giordano.com



**BID OPENING REPORT**

BID NAME: Site Remediation  
CRA Property (re-bid)  
 BID NUMBER: B-07-107

TIME: 2:02 PM

DATE: 7-24-07

ESTIMATED COST: \_\_\_\_\_

NO.	CONTRACTOR'S NAME	BID AMOUNT	COMMERCIAL RANKING
1.	Access Group, Inc.	\$172,670. <sup>00</sup>	2
2.	Dick Environmental Services	\$189,645. <sup>00</sup>	3
3.	Envirotek Tanktek, Inc.	\$211,197. <sup>50</sup>	4
4.	Dunkelberger Eng.	No Bid	—
5.	Geotech Environmental	\$94,016. <sup>50</sup>	1
6.	ELangan	\$453,191. <sup>36</sup>	5
7.			
8.			
9.			
10.			

**REMARKS**

THE TOWN SENT SPECS TO EIGHTEEN (18) PROSPECTIVE BIDDERS  
THE TOWN RECEIVED SIX (6) RESPONSES (5 BIDS AND 1 NO BID RESPONSE)

NOTE: THE ABOVE BID AMOUNTS HAVE NOT BEEN CHECKED, AND BID TOTALS ARE SUBJECT TO CORRECTION AFTER THE BIDS HAVE BEEN COMPLETELY REVIEWED.

THIS IS ONLY A FINANCIAL RANKING OF ALL THE BIDS RECEIVED. THE USING DEPARTMENT IS RESPONSIBLE FOR REVIEWING THE BIDS FOR COMPLIANCE WITH ALL THE BID SPECIFICATIONS PRIOR TO SUBMITTAL OF LETTER OF RECOMMENDATION.

PURCHASING OFFICIAL

WITNESS:

*Elena Blanton*  
*Angela Salinas*

DATE:

DATE:

7-24-07

7-24-07

# TOWN OF DAVIE PROCUREMENT AUTHORIZATION

**ACCOUNT NUMBER.** 010-0405-515-0502 **BUDGET ITEM & DESCRIPTION** Remediation of site located at 4493 Davie Rd. **APPROXIMATE COST** \$80,000.00  
CRA - SPECIAL PROJECT

**METHOD OF PROCUREMENT (check the one that applies)**

- ☒ Open Competitive Bidding  
☐ Piggyback on Contract Number \_\_\_\_\_  
☐ Sole Source  
☐ Request For Proposals

**SPECIFICATIONS & LIST OF VENDORS MUST BE ATTACHED**

Signed Will Albright  
Department Head

Have Funds been Reserved REQ. 35839

Date 4/27/07 Signed MA

Signed Gary Shum  
Town Administrator

**BIDS SUBMITTED**

VENDOR	COST
GEO TECH ENVIRONMENTAL	\$94,016.50
ACCESS GROUP, INC.	122,670.00
DICK ENVIRONMENTAL SERVICES	189,644.00
ENVIRO TEK TANK TEK, INC.	211,197.50
E. LANGAN	453,191.36
DUNKELBERGER ENG.	No Bid

O.P.Y.

Signed Hubert Mason  
Procurement Manager

**BID SPECIFICATION COMMITTEE'S RECOMMENDATION**

Vendor	Cost
GEO TECH ENVIRONMENTAL	\$94,016.50



COMMUNITY REDEVELOPMENT AGENCY  
4700 DAVIE ROAD, SUITE C • DAVIE, FLORIDA 33314-3399  
PHONE: 954.797.2093 • FAX: 954.797.1200 • WWW.DAVIE-FL.GOV

## Memorandum

TO: Herb Hyman, Procurement Manager

FROM: Will Allen, Redevelopment Administrator *Will Allen*

SUBJECT: Site Remediation Recommendation for Bid Spec Committee-  
GeoTech Environmental, Inc.

DATE: September 12, 2007

Please place the award of the bid for site remediation at the corner of Davie Road and Orange Drive on the Bid Spec Committee agenda. Six bids were received and the recommendation is to award to the low bidder, GeoTech Environmental, Inc. in the amount of \$94,016.50. The CRA Attorney, Sue Delegal drew up a contract which is consistent with the bid specs and the contract has been signed by GeoTech. The bids were reviewed by Lisa Maack of Calvin, Giordano & Associates, Inc. and the background was checked on GeoTech and they received favorable responses on their work performance on similar jobs. My conversations with GeoTech lead me to believe they can do this work.

Please have this added to the Bid Spec Comm. to award the low bid to GeoTech Environmental, Inc. A listing of the bids follows:

GeoTech Environmental, Inc.	\$94,016.50
Access Group Inc.	\$172,670.00
Dick Environmental Services, LLC	\$189,644.00
Envirotek	\$211,197.50
Langan Engineering & Environmental Services	\$453,191.36

I have a copy of each of their bids as do you as were opened on July 24, 2007. Once again, my recommendation is to award the bid to the low bidder, GeoTech Environmental, Inc.

**Request for Taxpayer  
Identification Number and Certification**

Give form to the  
requester. Do not  
send to the IRS.

Print or type  
See Specific Instructions on page 2.

Name (as shown on your income tax return)  
**Geotech Environmental, Inc.**

Business name, if different from above

Check appropriate box: ☐ Individual Sole proprietor ☒ Corporation ☐ Partnership ☐ Other ☐ Exempt from backup withholding

Address (number, street, and apt. or suite no.)  
**7737 N. UNIVERSITY DRIVE, SUITE 206**

City, state, and ZIP code  
**TAMPA, FLORIDA 33621**

Requester's name and address (optional)

List account number(s) here (optional)

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the amount is in more than one name, see the chart on page 4 for guidelines on whose number to enter.


Social security number  
or  
Employer identification number  
**6150427067**

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. person (including a U.S. resident alien).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. (See the instructions on page 4.)

**Sign Here** Signature of U.S. person  Date **NOV 24, 2007**

**Purpose of Form**

A person who is required to file an information return with the IRS, must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

**U.S. person.** Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued).
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee.

In 3 above, if applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

**Note.** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

For federal tax purposes, you are considered a person if you are:

- An individual who is a citizen or resident of the United States,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States, or
- Any estate (other than a foreign estate) or trust. See Regulations sections 301.7701-6(a) and 7(a) for additional information.

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity.

## Vendor/Bidder Disclosure

I, NILESH LAHMANI, being first duly sworn state that:  
The full legal name and business address of the person(s) or entity contracting with the  
Town of Davie ("Town") are as follows (Post Office addresses are not acceptable):

Name of Individual, Firm, or Organization: GEOTECH ENVIRONMENTAL, INC.  
Address: 7737 N. UNIVERSITY DR, S-E 206  
TAMPA, FL 33621  
FEIN: 66-042 7067  
State and date of incorporation: FLORIDA, JANUARY 28, 1993

### OWNERSHIP DISCLOSURE AFFIDAVIT

1. If the contract or business transaction is with a corporation, the full legal name and business address shall be provided for each officer and director and each stockholder who directly or indirectly holds five percent (5%) or more of the corporation's stock. If the contract or business transaction is with a trust, the full name and address shall be provided for each trustee and each beneficiary. All such names and address are as follows (Post Office addresses are not acceptable):

Full Legal Name	Address	Ownership
<u>NILESH LAHMANI</u>	<u>7737 N. UNIVERSITY DR</u> <u>SUITE 206, TAMPA, FL 33621</u>	<u>100</u> %
		%
		%
		%

2. The full legal names and business addresses of any other individual (other than subcontractors, materialmen, suppliers, laborers, and lenders) who have, or will have, any legal, equitable, or beneficial interest in the contract or business transaction with the Town are as follows (Post Office addresses are not acceptable):

Full Legal Name	Address

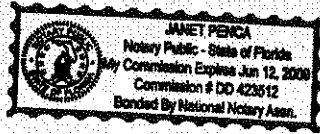
By: [Signature]

Signature of Affiant

Date: July 24, 2007

NILESH LAKHLANI  
Print Name

SUBSCRIBED AND SWORN TO or affirmed before me this 24<sup>th</sup> day of July 2007, by Nilesh Kumar Lakhani, he/she is personally known to me or has presented FL Drivers Lic as identification.



[Signature]  
Notary Public, State of Florida at Large

Janet Perica  
Print or Stamp of Notary

Serial Number \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

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No Events

No Name History

**Detail by Entity Name****Florida Profit Corporation**

GEOTECH ENVIRONMENTAL, INC.

**Filing Information**

Document Number P93000006849

FEI Number 650427067

Date Filed 01/28/1993

State FL

Status ACTIVE

**Principal Address**7737 N. UNIVERSITY DRIVE  
SUITE 206  
DAVIE FL 33321 US

Changed 01/24/2001

**Mailing Address**7737 N. UNIVERSITY DRIVE  
SUITE 206  
TAMARAC FL 33321 US

Changed 04/16/2004

**Registered Agent Name & Address**LAKHLANI, NILESH  
7737 N UNIVERSITY DR.  
#206  
TAMARAC FL 33321 US

Name Changed: 08/09/1993

Address Changed: 04/16/2004

**Officer/Director Detail****Name & Address**

Title T/S

LAKHLANI, RAKSHA  
7737 N UNIVERSITY DR., STE. 206[http://www.sunbiz.org/scripts/cordet.exe?action=DETFIL&inq\\_doc\\_number=P930000068...](http://www.sunbiz.org/scripts/cordet.exe?action=DETFIL&inq_doc_number=P930000068...) 9/20/2007

TAMARAC FL 33321

Title P/D

LAKHLANI, NILESH  
7737 N UNIVERSITY DR, STE. 206  
TAMARAC FL 33321

**Annual Reports****Report Year Filed Date**

2005	04/06/2005
2006	04/17/2006
2007	01/25/2007

**Document Images**

[01/25/2007 -- ANNUAL REPORT](#)  
[04/17/2006 -- ANNUAL REPORT](#)  
[04/06/2005 -- ANNUAL REPORT](#)  
[04/16/2004 -- ANNUAL REPORT](#)  
[04/18/2003 -- ANNUAL REPORT](#)  
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